CRB

California Research Bureau
900 N Street, Suite 300
P.O. Box 942837
Sacramento, CA 94237-0001
(916) 653-7843 phone
(916) 654-5829 fax

San Joaquin Valley

Selected Statistics on Population, Economy, and Environment

By Kenneth W. Umbach, Ph.D.

Prepared at the request of the Senate Select Committee on Central Valley Economic Development

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Contents

Preface

This paper was prepared at the request of the Senate Select Committee on Central Valley Economic Development. It is a statistical overview of the eight counties of the San Joaquin Valley, based on data published by state and federal agencies. Its purpose is to provide background for evaluation of policy needs related to the San Joaquin Valley.

The paper uses a format similar to two earlier papers that encompassed the entire Great Central Valley, from Shasta County to Kern County. Some portions of the 1998 version of that paper have been reused or adapted in this paper, but wherever possible data have been updated to the latest available. Some charts have been added or redesigned.

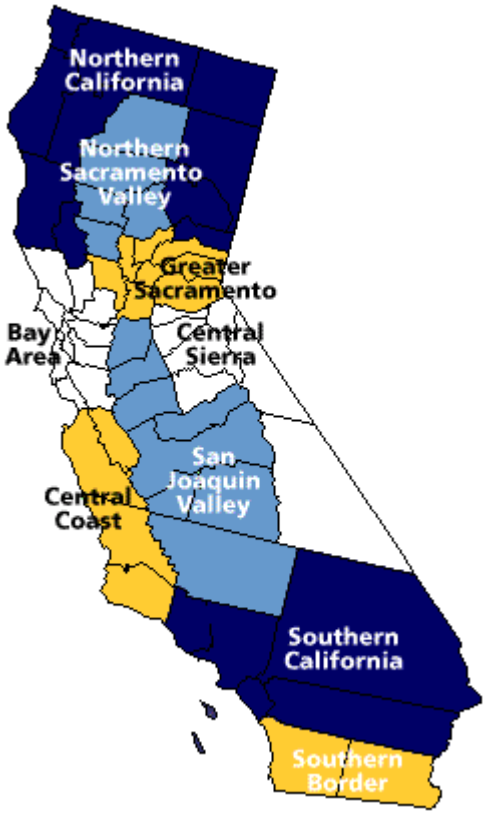
For earlier data, see *A Statistical Tour of California's Great Central Valley – 1998*, published by the California Research Bureau.

Data are from several sources and may not be fully consistent from one chart or topic to another. Dates and sources are cited, with Web links where available. Each chart is intended to be internally consistent, but discussions of data limitations have generally been omitted. For that information the reader should consult the original source.

1. Overview of the Counties of the San Joaquin Valley

We begin with a brief overview of the eight counties, arranged from north to south. Population data are estimates for January 1, 2000.*

For context, here is a map of California's regions, according to "Counting California."



Map © 2001 The Regents of the University of California
http://countingcalifornia.cdlib.org. Used by permission.

SAN JOAQUIN

San Joaquin County, northernmost of the San Joaquin Valley counties, is in the heart of the agricultural Central Valley. Some 90.3 percent of its land area is in farms (1997 data). What makes this figure surprising is that at the same time the county has a population of over half a million (566,600, January 1, 2000 estimate). Most of the county's population is in incorporated cities: Stockton (247,300), Lodi (57,900), Tracy (54,200),

* Most of the data for these county overviews is from the 2000 edition of the Department of Finance's *California County Profiles*, which in turn gathers data from several state and federal sources.

Manteca (49,500), Ripon (10,400), Lathrop (9,975), and Escalon (5,825). The remaining 131,400 are in unincorporated areas.

San Joaquin County's leading manufacturing industry (1997)* is food; this is followed by beverage & tobacco products†; fabricated metal; nonmetallic mineral products; plastics & rubber products; paper; and wood products. Leading agricultural commodities in the county (1999 value of production) are grapes and milk, followed at a distance by tomatoes, cherries, almonds, walnuts, asparagus, apples, hay, and cattle and calves. The leading agricultural category for the county is "fruit and nuts."

Portions of the county serve as "bedroom communities" for the Bay Area and Silicon Valley.

STANISLAUS

Stanislaus County, immediately south of San Joaquin County, is also predominantly farmland (76.6 percent, according to 1997 data), but also has a substantial population of 441,400. Cities are Modesto (188,300), Turlock (53,500), Ceres (32,950), Oakdale (14,950), Riverbank (14,600), Patterson (10,950), Waterford (6,775), Newman (6,375), and Hughson (3,620). The remaining 109,400 residents are in unincorporated areas.

The leading manufacturing industry in the county (1997) is food, far outdistancing paper, fabricated metal products, and others. The county's main agricultural products include milk, almonds, chickens, cattle and calves, tomatoes, nursery (deciduous fruit and nut), walnuts, grapes, peaches, and alfalfa. By broad category, the leaders are "livestock and livestock products" and "fruit and nuts."

The city of Turlock is home to California State University, Stanislaus. The city of Modesto is home to the Great Valley Center, an organization founded in 1997 that conducts and sponsors research and communications on the interests of the Central Valley as a whole.

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* Note: "The 1997 Economic Census - Manufacturing covers all manufacturing establishments with one or more paid employees. Manufacturing is defined as the mechanical, physical, or chemical transformation of materials or substances into new products." (From http://www.census.gov/prod/www/abs/97ecmani.html.) The relative importance of industry sectors as listed in these county overviews reflects value added by manufacture.

† The Census category groups beverages with tobacco, but for San Joaquin County, this category really means *just* "beverages," predominantly wineries. For categories and definitions, plus access to detailed data, see http://www.census.gov/epcd/ec97/us/US000_31.HTM.

MERCED

Another predominantly farmland county (71.4 percent of land in farms, according to 1997 data), Merced County is south of Stanislaus and, like Stanislaus, firmly in the center of California's Great Central Valley. The county's population of 210,100 (January 1, 2000 estimate) is distributed among several cities: Merced (63,300), Los Baños (23,250), Atwater (22,550), Livingston (10,550), Dos Palos (4,460), and Gustine (4,440). The remaining 81,500 residents are in unincorporated areas.

As is typical in the Central Valley counties, Merced's leading manufacturing industry (1997) is food; this is followed distantly by fabricated metal products and by beverage & tobacco products. Chief agricultural products (1999) include milk (the clear leader), chickens, almonds, tomatoes, cotton, cattle and calves, alfalfa, sweet potatoes, wine grapes, and corn silage. By broad category, leading products are "livestock and livestock products," "fruit and nuts," "field crops," "poultry and poultry products," and "vegetables."

A new University of California campus is under development for Merced County, with an expected opening date of 2004. Faculty recruitment is already underway.[1]

MADERA

Although Madera County is in the Central Valley, sandwiched in part between Merced and Fresno,[*] it also reaches east, well into the Sierra National Forest and Yosemite National Park. The county's 117,100 people (January 1, 2000, estimate) are distributed among the City of Madera (37,600), City of Chowchilla (13,650), and unincorporated areas (65,800). Nearly half (46.9 percent) of the county's land area was in farms as of 1997.

Leading manufacturing industries (1997) include nonmetallic mineral products, machinery, and food. Primary agricultural products (1999) include grapes (the clear leader), milk, almonds and hulls, pistachios, nursery stock, cotton, replacement heifers, alfalfa hay, poultry, and cattle and calves. The leading broad category is "fruit and nuts," followed at a distance by "livestock and livestock products."

[*] Fresno and Madera counties are sometimes joined for statistical purposes, labor market in particular. Madera was part of Fresno County until 1893 (http://www.cagenweb.com/madera/MadHistory.html).

FRESNO

Large both in land area and population, Fresno County, like Madera, stretches well to the east of the valley and into the Sequoia National Park. About 40 percent of the land in Fresno County, mostly in foothill and mountain areas, is owned by government, predominantly the federal government. (Madera has a comparable percentage, and Tulare an even higher one.) About 49 percent of the county's land area is in farms.

The City of Fresno (420,600) encompasses more than half of the county's 805,000 population. The rest of the county's residents are distributed among 14 other incorporated cities (Clovis, at 70,700, by far the largest of them, and San Joaquin at 3,260, the smallest), and unincorporated areas (176,400). The other incorporated cities of Fresno county, whose distinctive names are so recognizable to those who frequently travel through the Central Valley, are: Reedley (20,950), Sanger (19,050), Selma (18,700), Coalinga (15,200), Parlier (11,400), Kingsburg (9,425), Orange Cove (7,900), Mendota (7,850), Kerman (7,800), Firebaugh (6,125), Huron (5,875), and Fowler (3,870).

Leading manufacturing industries (1997) include food (far in front); machinery; nonmetallic mineral products; and fabricated metal products. Leading agricultural products (1999 value of production) include grapes, poultry, cotton, tomatoes, milk, garlic, cattle and calves, almonds, peaches, and plums. Looking at broader categories, "fruit and nuts" and "vegetables" are the leading agricultural sectors for the county. Fresno is the most productive agricultural county in the state and in the nation in terms of value of agricultural products sold. (In 1997, Kern, Tulare, and Monterey were the second, third, and fourth in the nation, according to the federal Census of Agriculture, while Merced, Stanislaus, and San Joaquin were sixth, seventh, and eighth, and Riverside ninth. Of these, only Monterey and Riverside are not in the San Joaquin Valley.[2])

Fresno County is also home to a California State University campus.

KINGS

Kings County has 73.9 percent of its land area in farms (1997), although this is down substantially from the 1992 figure of 87.2 percent.[*] Kings County is tucked between Fresno, Tulare, and Kern counties, with a small western border along the east side of coastal Monterey County. Kings County's population of 131,200 (January 1, 2000, estimate) is distributed

[*] I cannot say whether this decline represents actual changing land use, a statistical inconsistency or changed definitions, or a combination, but the difference seems large.

among the cities of Hanford (41,000), Corcoran (21,550), Lemoore (18,800), Avenal (13,100), and unincorporated areas (36,750).

The county's leading manufacturing industry (1997) is food. The dominant agricultural products (1999 production value) are milk and cotton, followed distantly by cattle and calves, turkeys, alfalfa (hay and seed), pistachios, corn silage, tomatoes, and grapes. Leading broad agricultural categories are "livestock and livestock products" and "field crops."

TULARE

Tulare County, immediately to the east of Kings, stretches into the Sequoia National Forest and Inyo National Forest. Most of the land in the county ─ 52 percent, mostly in foothill and mountain areas ─ is owned by government, predominantly the federal government. That is the highest percentage among the Central Valley counties. The county has 42.4 percent of its land area in farms (1997). The county's population of 368,000 (January 1, 2000 estimate) resides in the cities of Visalia (96,800), Tulare (41,800), Porterville (37,600), Dinuba (15,700), Lindsay (9,050), Exeter (8,620), Farmersville (7,700), and Woodlake (6,450), with the other 144,300 county residents in unincorporated areas.

Tulare County's leading manufacturing industry (1997) is food, followed distantly by "printing products & related support activities," and at a further distance by fabricated metal products, plastics & rubber products, wood, and machinery. Leading agricultural products (1999) include milk (the clear leader), grapes, oranges, cattle and calves, cotton lint and seed, alfalfa hay and silage, nectarines, peaches, and grain and silage corn. By broad agricultural product category, the leader is "fruits and nuts" followed closely by "livestock and livestock products." Tulare County is one of the most productive agricultural counties in California and the nation.

KERN

At the south end of the Central Valley, Kern County is immediately north of Ventura and Los Angeles counties, and south of Kings and Tulare counties. Mountain ranges, including the Tehachapi Mountains, mark the southern end of the Central Valley, south and east of Bakersfield.

Kern county's population of 658,900 (January 1, 2000, estimate) resides in the City of Bakersfield (237,200) and in ten much smaller cities (Delano being the largest of the ten, with 35,550 residents, and Maricopa the smallest, with 1,250), plus 273,800 (nearly 42 percent) in unincorporated areas. The other cities in Kern County are Ridgecrest (27,300), Wasco

(20,100), Tehachapi (12,600), Shafter (11,900), Arvin (11,850), McFarland (9,450), Taft (9,150), and California City (8,775).

Food is the county's leading manufacturing industry, followed by a substantial segment in chemical, and more distantly by nonmetallic mineral products, fabricated metal products, machinery, and a relatively small segment of wood products. The County's large and varied agriculture (fourth among California counties in 1999) includes grapes, cotton and processed cottonseed, citrus, milk, almonds and by-products, carrots, nursery crops, cattle and calves, alfalfa hay, and potatoes. By broad agricultural product category, the leaders are fruit and nuts, field crops, vegetables, livestock and livestock products, and nursery products. More than half of the county's land area (54.7 percent) is in farms (1997 data). The county is also known for its oil fields and is home to California State University, Bakersfield.

The City of Bakersfield is about as far from Los Angeles as it is from Fresno, although the trip to Los Angeles goes through mountain ranges and that to Fresno is over flat valley land.

COMMENTS

A few points stand out in the county summaries:

- Food is the leading manufacturing industry in each of the eight counties
- Agriculture is varied in each county, although some counties are more concentrated in one agricultural sector than are other counties
- Land area in farms ranges from a large percentage (over 42 percent, Tulare) to an overwhelming percentage (over 90 percent, San Joaquin)
- A large proportion of county population, (over half in Madera County), is in unincorporated areas, and city populations vary widely

One might ask whether it is better for the economy of the San Joaquin Valley to capitalize further on the established agricultural base and food manufacturing sector or to seek to grow and broaden the other economic sectors throughout the counties in order to reduce dependence on agriculture and food manufacturing. Or can both approaches be taken at the same time?

2. Population

BASIC POPULATION CHARACTERISTICS

The charts in this section give a "big picture" overview of total population, population density, and a few demographic characteristics. The charts are largely self explanatory.

Chart 2-1

Population of San Joaquin Valley Counties, 2001

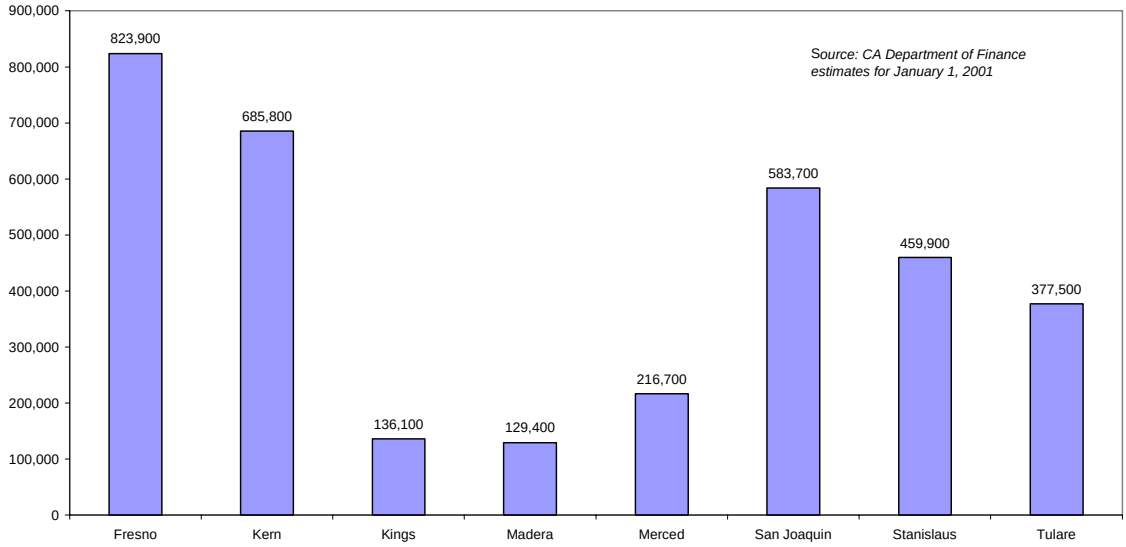


Chart 2-2

Land Area of San Joaquin Valley Counties

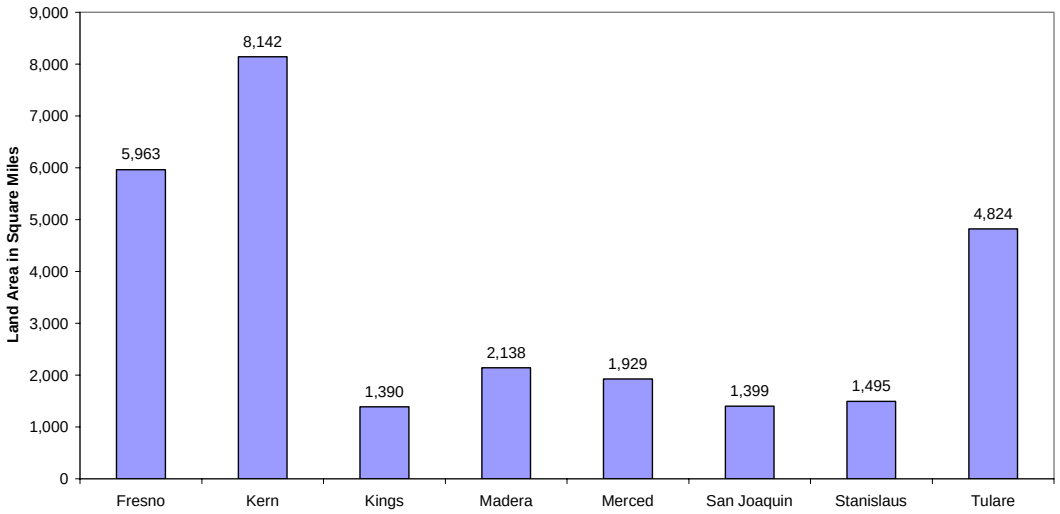
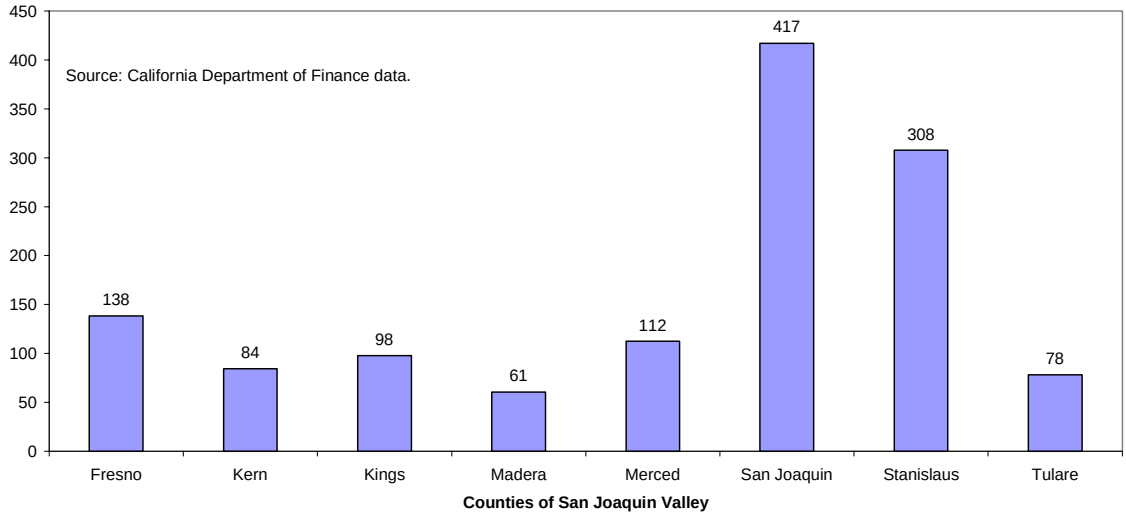


Chart 2-3

San Joaquin Valley Counties Vary Widely in Population per Square Mile, 2001

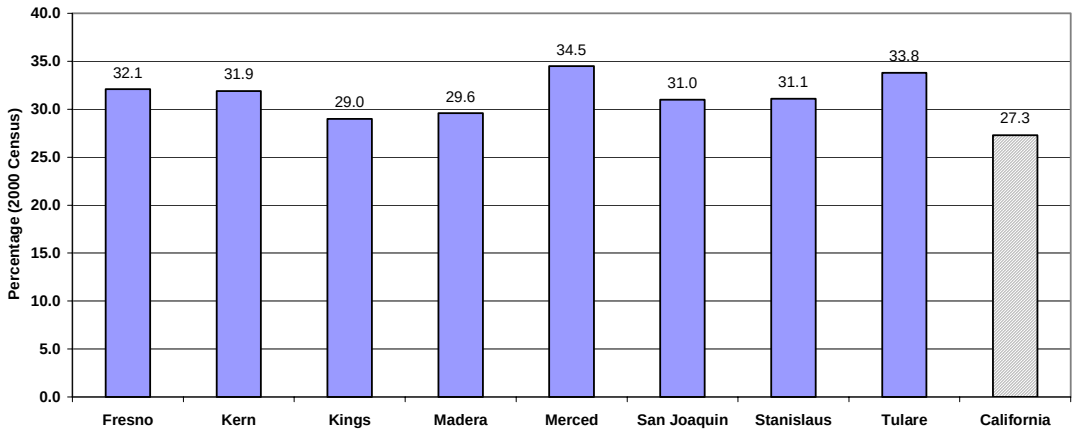


Although population density varies widely on a county-by-county basis, it is important to remember that large parts of some counties are virtually unpopulated, while many people live in the limited space of cities and towns. The county comparisons are not necessarily as clear as the numbers suggest in terms of the actual living conditions of most San Joaquin Valley residents.

The presence of a higher proportion of persons under age 18 has implications for demands on public schools, workforce, tax revenues, and family incomes. Persons under 18 tend to be in school, inexperienced workers or not yet working, not paying taxes, and not contributing significantly to household income.

Chart 2-4

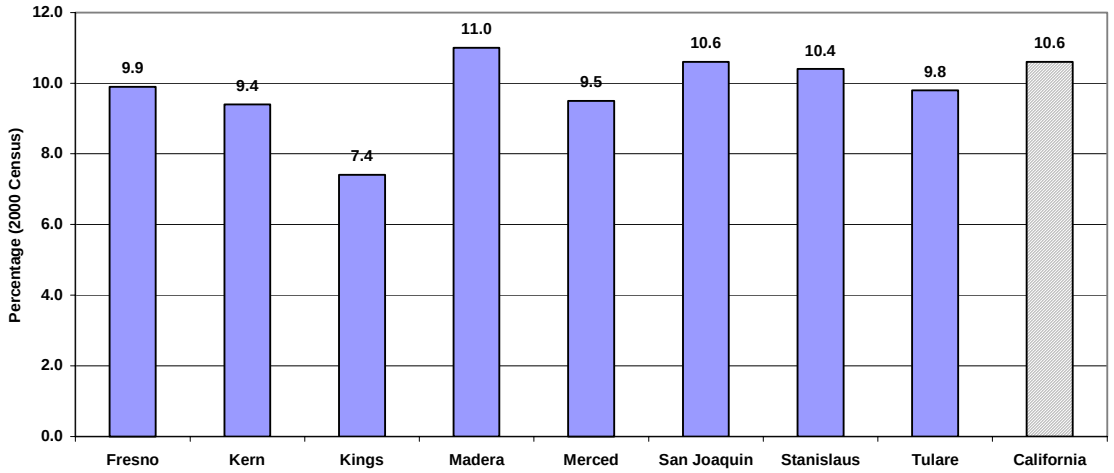
San Joaquin Valley Counties Have Higher Percentages of Residents Under 18 than California as a Whole



The pattern with regard to persons over 65 is mixed, but the percentage tends to be below the state average. In the case of Kings county, the percentage is well below.

Chart 2-5

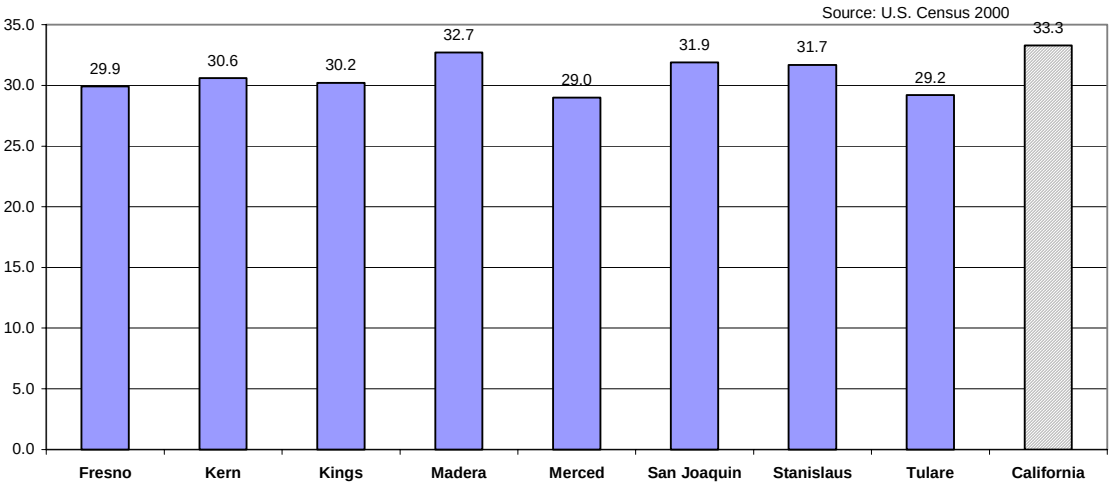
Percentage of Population 65 and Over Varies



Median age, reflecting the entire population (half are over the median, half under), tends to be lower in the San Joaquin Valley counties than in the state overall.

Chart 2-6

Median Age, 2000



RACE AND HISPANIC/LATINO ORIGIN

Statistics by race are more complicated for the 2000 Census than in past years, as persons responding to the questionnaire could, among other changes, select two or more races. Hispanic/Latino background is a factor in addition to race.

The percentage of the population that is Hispanic/Latino in the San Joaquin Valley counties is higher than the statewide figure, with the close exceptions of San Joaquin (slightly less) and Stanislaus (almost identical). Persons who are "Hispanic or Latino" may be of any race.[3]

Chart 2-7

Hispanic/Latino Percentage Higher in Most San Joaquin Valley Counties than in California, 2000

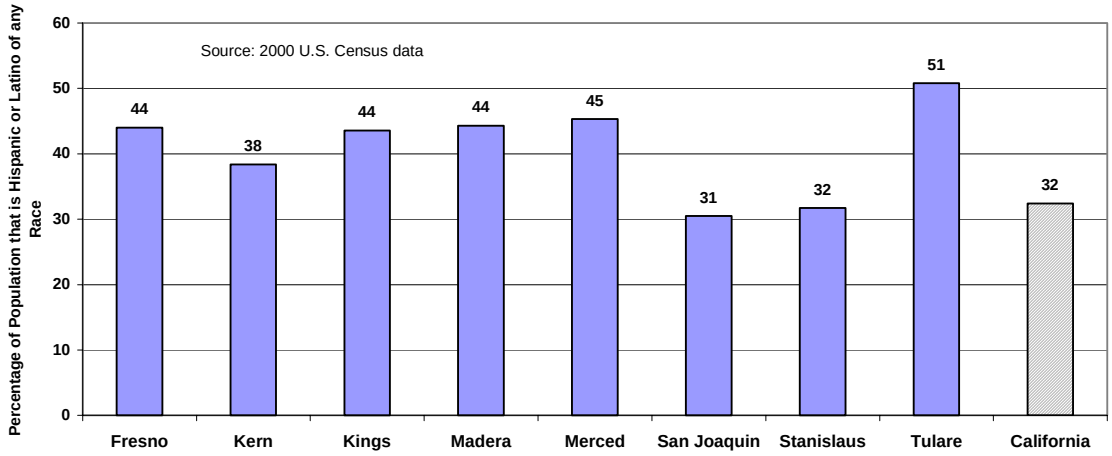


Table 2-1 (next page) summarizes the percentages by race, as reported for Census 2000, for California and the counties of the San Joaquin Valley. As is apparent, the categories of "some other race" and "two or more races" make analysis more complicated than previously, when choices were fixed and fewer. However, those additional categories perhaps more realistically represent the diversity of the population of the nation.

Table 2-1

	2000 Census														
		Percent of total population								Percent of Total Population					
	Total population	White	Black or African American	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	Some other race	Two or more races	Total	Hispanic or Latino (of any race)	White alone, not Hispanic or Latino	Non-White, non-Hispanic/ Latino of any Race	Total
Fresno	799,407	54.3	5.3	1.6	8.1	0.1	25.9	4.7	100	44.0	39.7	16.3	100
Kern	661,645	61.6	6.0	1.5	3.4	0.1	23.2	4.1	100	38.4	49.5	12.1	100
Kings	129,461	53.7	8.3	1.7	3.1	0.2	28.3	4.8	100	43.6	41.6	14.8	100
Madera	123,109	62.2	4.1	2.6	1.3	0.2	24.4	5.2	100	44.3	46.6	9.1	100
Merced	210,554	56.2	3.8	1.2	6.8	0.2	26.1	5.7	100	45.3	40.6	14.1	100
San Joaquin	563,598	58.1	6.7	1.1	11.4	0.3	16.3	6.0	100	30.5	47.4	22.1	100
Stanislaus	446,997	69.3	2.6	1.3	4.2	0.3	16.8	5.4	100	31.7	57.3	11.0	100
Tulare	368,021	58.1	1.6	1.6	3.3	0.1	30.8	4.6	100	50.8	41.8	7.4	100
California	33,871,648	59.5	6.7	1.0	10.9	0.3	16.8	4.7	100	32.4	46.7	20.9	100

POPULATION GROWTH TREND

The San Joaquin Valley has seen a rapid increase in population in recent decades. The charts in this section cover 1980 to 2001. For earlier data, see *A Statistical Tour of California's Great Central Valley – 1998*.

Chart 2-8

County Populations, 1980, 1990, 2000, 2001

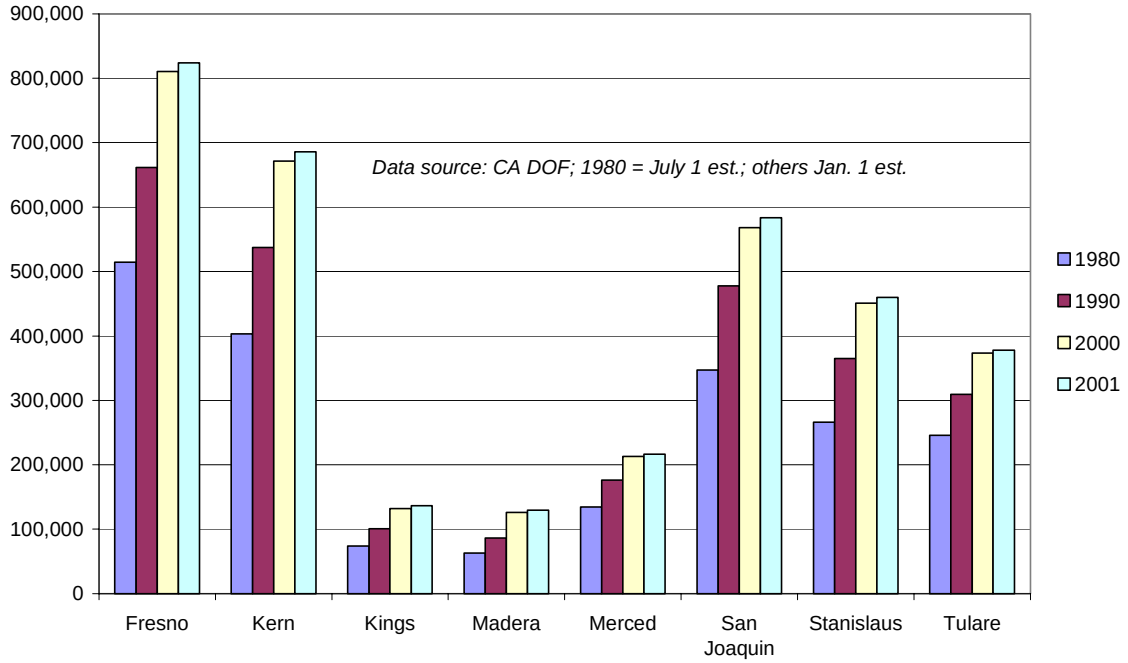


Table 2-2

	Population (estimated)			
	1980	**1990**	**2000**	**2001**
Fresno	514,621	661,400	810,300	823,900
Kern	403,089	537,300	671,300	685,800
Kings	73,738	100,800	132,100	136,100
Madera	63,116	86,400	125,800	129,400
Merced	134,558	176,300	212,800	216,700
San Joaquin	347,342	477,700	568,300	583,700
Stanislaus	265,900	365,100	451,000	459,900
Tulare	245,738	309,200	373,100	377,500
Total	2,048,102	2,714,200	3,344,700	3,413,000

Note: 1980 California total is DOF estimate for July 1 (Statistical Abstract 2000, B-1); other California totals are DOF January 1 estimates.

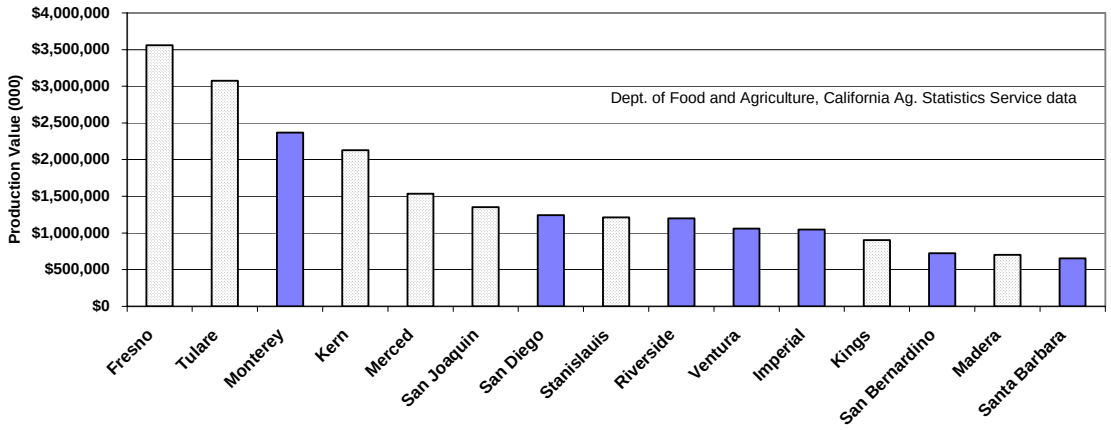
3. Agricultural Economy and Employment

The San Joaquin Valley is one of the most productive agricultural regions on Earth. This section summarizes agricultural crops and employment in the eight counties.

Chart 3-1 shows the place of the San Joaquin Valley counties among California's 15 leading agricultural counties. Those eight counties are shown with lighter colored bars on the chart.

Chart 3-1

San Joaquin Valley Counties are Eight of the Fifteen Leading California Agricultural Counties by Total Value of Production, 1999



MAJOR CROPS

The eight counties focus on some important crops and other agricultural products. The products are varied, but the leaders encompass a relatively few types, with emphasis on milk, grapes, poultry, almonds, cotton, and cattle & calves. Table 3-1 shows figures for 1999.[4]

Table 3-1

County	1999 Value of Production ($1,000)	Leading crops (extracted from Agricultural Commissioners' Annual Crop Reports)
Fresno	$3,559,604	Grapes, poultry, cotton, tomatoes, milk
Tulare	3,075,978	Milk, grapes, navel & valencia oranges, cattle & calves, plums
Kern	2,128,896	Grapes, cotton & processed cottonseed, all citrus, all milk, almonds & by-products
Merced	1,534,020	Milk, chickens, almonds, tomatoes, cotton
San Joaquin	1,352,672	All grapes, all milk, all tomatoes, all cherries, almond meats
Stanislauis	1,210,211	All milk, almonds, all chickens, cattle & calves, all tomatoes
Kings	901,627	Milk, cotton, cattle & calves, turkeys, alfalfa hay
Madera	700,241	Grapes, milk, almonds & hulls, pistachios, nursery stock

These products are important to California's agricultural exports.[5]

Table 3-2

CALIFORNIA'S 15 LEADING AGRICULTURAL EXPORTS a/
BY COMMODITY GROUP, 1997 TO 1999

	1997		1998 r/		1999	
	Export Value		Export Value		Export Value	
Commodity	Rank	($ millions)	Rank	($ millions)	Rank	($ millions)
Almonds	2	$818.3	1	$759.5	1	$623.8
Wine	3	375.9	3	505.7	2	498.5
Cotton	1	918.3	2	733.7	3	429.5
Table grapes b/	4	330.3	6	265.5	4	312.6
Milk & cream	8	214.8	5	275.1	5	311.1
Tomatoes, processed	7	226.3	7	224.4	6	222.8
Rice b/	11	144.4	8	208.0	7	194.2
Raisins	9	199.8	9	194.6	8	191.7
Walnuts	10	153.0	11	150.5	9	147.5
Lettuce	14	120.8	13	125.6	10	144.6
Beef & products b/	6	262.0	10	162.3	11	141.5
Oranges	5	308.4	4	320.2	12	139.1
Strawberries	15	116.5	14	122.0	13	133.7
Prunes	13	139.2	12	134.1	14	130.2
Peaches/Nectarines b/	18	102.1	16	92.0	15	108.2

a/ f.a.s.[free alongside ship] value basis
b/ The methods used to determine exports for these commodities were updated in 2000 and applied to 1999 data and 1998 revised data.
r/ Revised

SPECIALTY CROPS

Defining the term "specialty crop" is not simple, as "[t]here is not a standard [national] definition of specialty crops, other than they do not include field corn, soybeans, hay and wheat. They include fruit, tobacco, vegetables for fresh market sales and cut flowers for fresh or dried arrangements."[6] Some crops that are important and widely produced in California – not "specialties" here – nonetheless fall under the most widely understood meaning of the term. In that sense, California's agricultural specialty *is* specialty crops – a very wide variety of them serving state, national, and in many cases world markets.

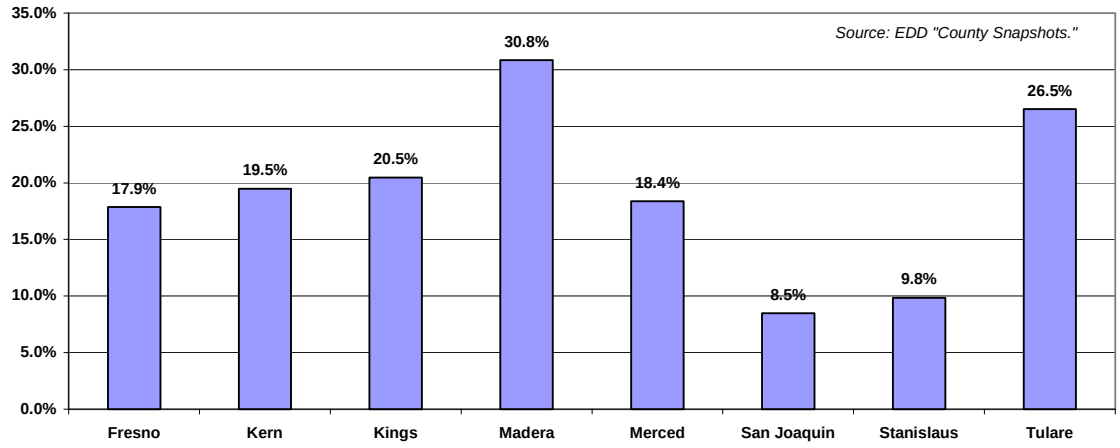
By national standards, specialty crops play an important role in every county of the San Joaquin Valley, in contrast to the major crops that dominate some agricultural states.

EMPLOYMENT IN AGRICULTURE

Many San Joaquin Valley jobs are in agriculture, of course, but the proportion varies widely from county to county.

Chart 3-2

Agriculture as Percentage of Employment in County:
San Joaquin Valley Counties, 2001



For comparison, the percentage of employment in agriculture among the 4.5 million employed in Los Angeles County is less than two-tenths of a percent (0.167 percent). The statewide figure is approximately 2.1 percent.

This important role of agricultural employment in the San Joaquin Valley counties has many implications. Much agricultural employment is seasonal, which contributes to relatively high unemployment. Pay tends to be low, which contributes to low per capita and household incomes. However, agricultural products are needed all year round, and for that reason they are somewhat protected from the ups and downs that can more strongly affect other areas of the economy. California's role as sole or predominant supplier of some products is also important to the economic stability of agricultural counties.

4. Business and Industry

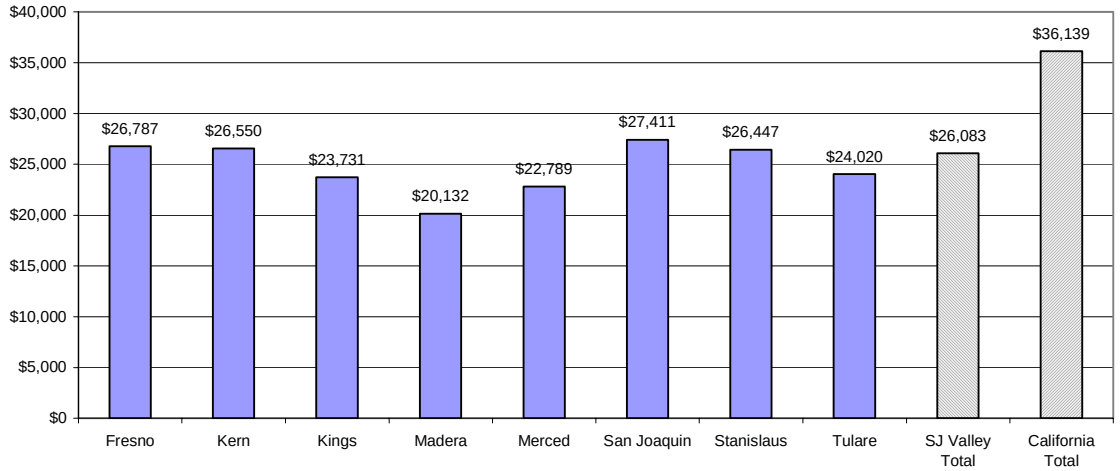
This section summarizes other sectors of business, industry, and employment in the San Joaquin Valley, aside from directly agricultural. Also see county-by-county lists of major employers in the Appendix to this paper.

PAYROLLS

Payroll per employee is lower in the San Joaquin Valley counties than in California as a whole. This reflects the role of agriculture in the San Joaquin Valley, which tends to be relatively low-paying, and the relative lack of the very high-paying settings found in such areas as the Silicon Valley.

Chart 4-1

Average Annual Payroll per Employee, 1999



Source: U.S. Census data

SIZE OF FIRMS

U.S. Census data (*County Business Patterns, 1999*) shows that small firms dominate the counties of the San Joaquin Valley, as they do the state as a whole – and, for that matter, the nation as a whole.

Chart 4-2

Small Firms Dominate Business Patterns in S.J. Valley Counties

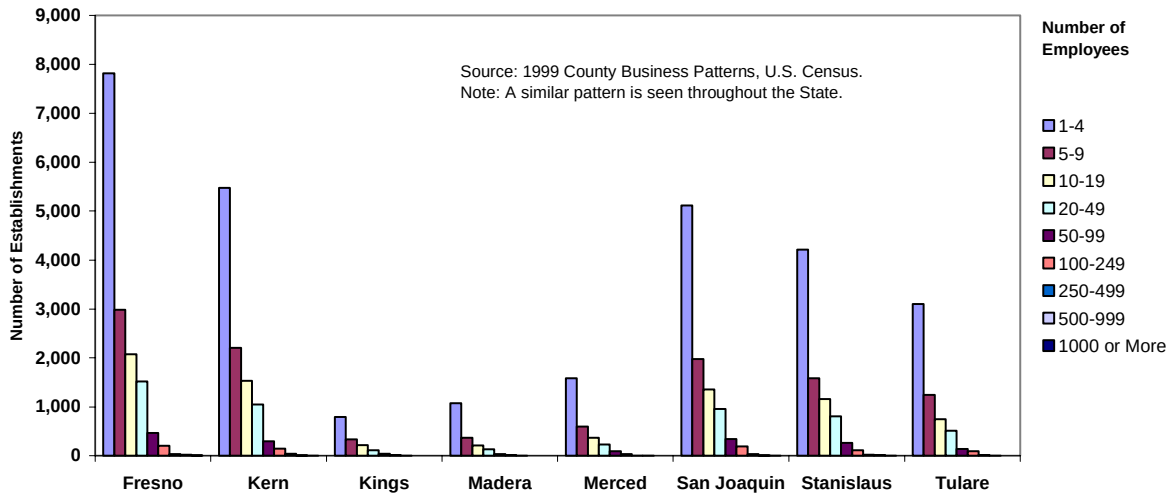
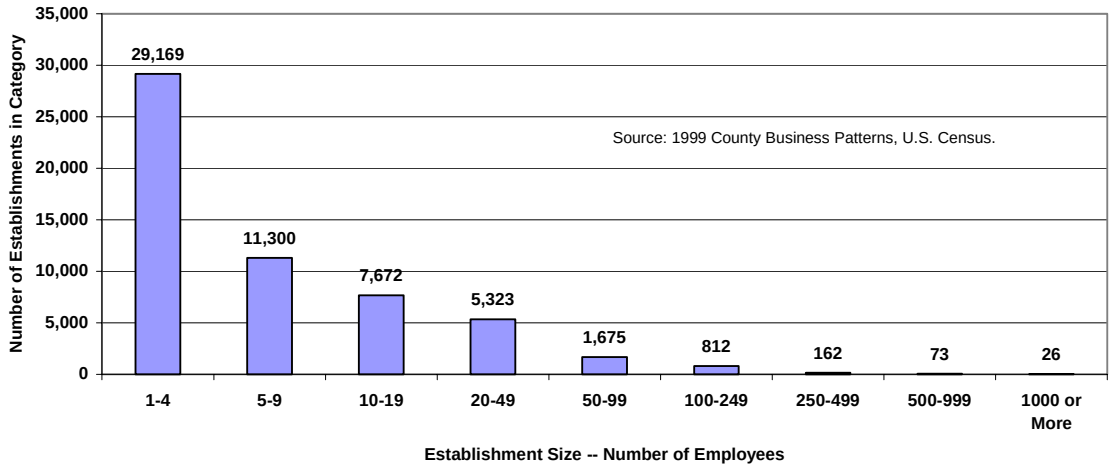


Chart 4-3 is another view of these data, this time summarizing all eight counties.

Chart 4-3

Small Firms Outnumber Large Firms in the San Joaquin Valley



The average number of employees per establishment is 13.7 for the San Joaquin Valley counties, somewhat below the 15.7 figure for California as a whole.

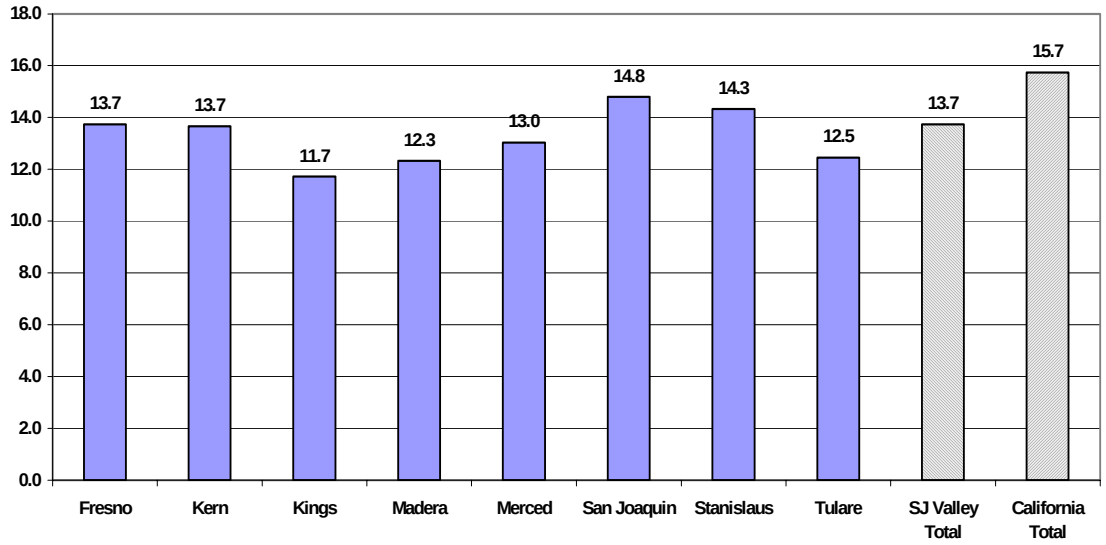
On the basis of the available data and some rough estimates – and please note, these ARE rough estimates, not official data – it appears likely that more than half of all employees in the San Joaquin Valley work for establishments with fewer than 50 employees. It also appears likely that about two-thirds of employees in the San Joaquin Valley work for

establishments with fewer than 100 employees. These figures, however, are approximations. The actual figures are probably somewhat higher.

Comparable estimated statewide proportions are slightly lower, consistent with expectation that the firms with the largest employee counts would be found in major metropolitan areas, such as Los Angeles and the San Francisco Bay Area.

Chart 4-4

Average Number of Employees per Establishment, 1999



Twenty-six firms in the eight San Joaquin Valley counties fall in the category of 1,000 or more employees. However, 29,169 establishments have from one to four employees each, and nearly 27,000 firms fall between the extremes.

EMPLOYMENT BY INDUSTRY

Employment within the eight counties differs. Tables 4-1 and 4-2 show the percentage and numerical breakdowns by major industry groups for persons employed within the county (those who work there, whether residents or commuters into the county).

Table 4-1

Employment Percentages, by Industry

	Agriculture	Construction and Mining	Manufacturing	Transportation and Public Utilities	Trade: Retail	Trade: Wholesale	Finance, Insurance, Real Estate	Services	Government	Total Employment in County
Fresno	17.9%	4.7%	8.5%	4.0%	15.3%	4.5%	4.2%	21.3%	19.7%	100%
Kern	19.5%	8.2%	4.0%	4.7%	15.0%	3.6%	3.0%	20.4%	21.5%	100%
Kings	20.5%	2.7%	8.8%	2.2%	14.2%	2.7%	1.9%	14.1%	32.9%	100%
Madera	30.8%	3.9%	8.5%	2.6%	12.6%	1.8%	1.5%	19.5%	18.8%	100%
Merced	18.4%	3.5%	17.0%	4.1%	16.6%	2.7%	3.1%	15.5%	19.2%	100%
San Joaquin	8.5%	5.8%	12.5%	6.6%	16.7%	4.6%	4.1%	23.0%	18.1%	100%
Stanislaus	9.8%	6.1%	16.5%	3.5%	18.7%	4.3%	3.0%	23.2%	14.9%	100%
Tulare	26.5%	3.8%	9.3%	3.5%	15.1%	3.5%	2.8%	14.8%	20.8%	100%

The counties differ considerably in number of employed persons, of course. Here are the numbers on which the percentages are based:

Table 4-2

Employment Totals, by Industry

	Agriculture	Construction and Mining	Manufacturing	Transportation and Public Utilities	Trade: Retail	Trade: Wholesale	Finance, Insurance, Real Estate	Services	Government	Total Employment in County
Fresno	58,900	15,400	28,000	13,100	50,300	14,700	13,900	70,300	65,000	329,600
Kern	46,900	19,800	9,700	11,300	36,100	8,700	7,300	49,200	51,800	240,800
Kings	7,710	1,030	3,320	810	5,350	1,030	720	5,300	12,400	37,670
Madera	12,000	1,500	3,300	1,000	4,900	700	600	7,600	7,300	38,900
Merced	11,700	2,200	10,800	2,600	10,600	1,700	2,000	9,900	12,200	63,700
San Joaquin	17,300	11,900	25,500	13,500	34,100	9,400	8,400	47,000	37,000	204,100
Stanislaus	15,900	9,800	26,700	5,600	30,200	7,000	4,800	37,500	24,100	161,600
Tulare	35,500	5,100	12,400	4,700	20,200	4,700	3,700	19,800	27,800	133,900

These numbers reflect *employment in* each county, not the number of workers who *reside* in each county. Some workers commute from another county, and persons who live in the county but work in another county are counted in the other county for purposes of this tabulation.

Tables 4-1 and 4-2 show that the eight counties of the San Joaquin Valley differ considerably in their economic makeups. For example, Madera County and Tulare County have about three times the proportion of employment in agriculture as do San Joaquin and Stanislaus. The others are roughly midway between.

Likewise, manufacturing is a much more prominent part of employment in Merced and Stanislaus counties than in the other counties, especially Kern. Government is a larger sector in Kings than in the other counties, in percentage terms,* while "construction and mining" is a more important factor in Kern than in the other counties. This suggests that "one size fits all" approaches to the entire San Joaquin Valley may not be appropriate, and that there may be room to develop improved cooperation and coordination throughout the San Joaquin Valley to make the most of the entire array of commerce among the eight counties.

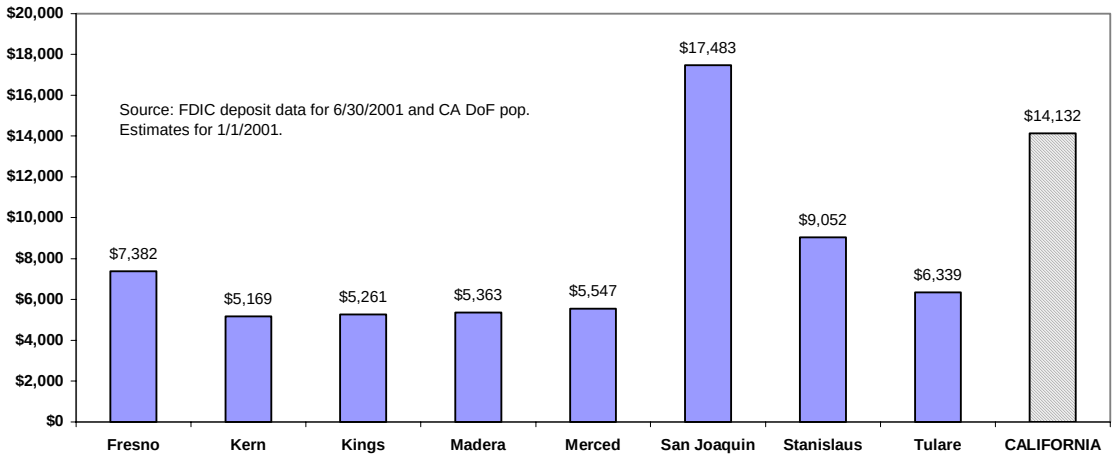
BANK DEPOSITS

Per capita deposits in banks and savings institution in offices in the San Joaquin Valley counties are generally lower than for California as a whole. However, San Joaquin County is an exception, with per capita deposits of about 24 percent over the statewide average (chart 4-5). The figure for San Joaquin County is influenced by the county's being home to Washington Mutual Bank, one of California's largest financial institutions.[7]

* This might merely mean that a relatively large number of Kings County residents commute to work in another county, most likely Fresno, although that cannot be determined from the available statistics.

Chart 4-5

Bank and Savings Institution Deposits per Capita, June 2001
in Offices Located in SJ Valley Counties and in California

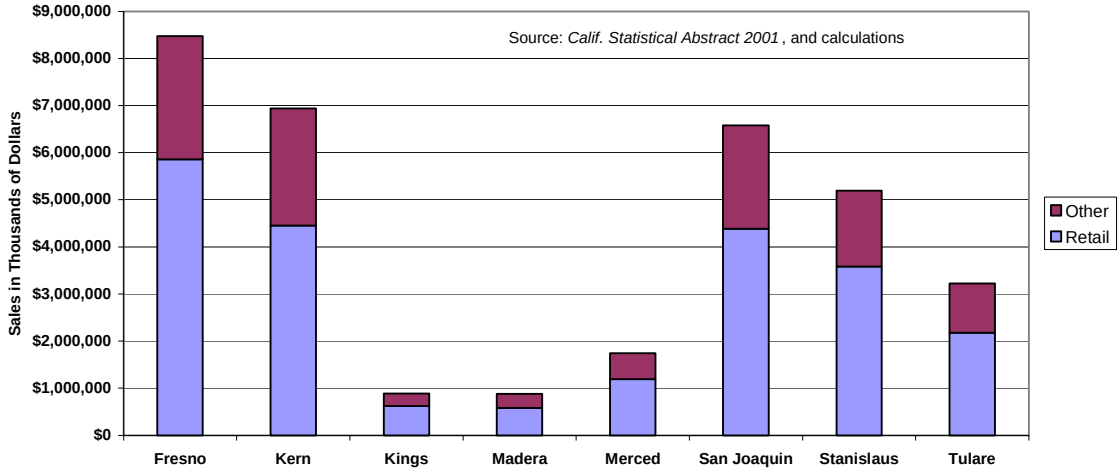


TAXABLE SALES

Sales of taxable goods of course vary widely from one county to another in the San Joaquin Valley. Differences reflect both the respective populations of the counties and the types and extent of business in each county. The charts below show taxable sales in each county and taxable sales per capita in each county and statewide.

Chart 4-6

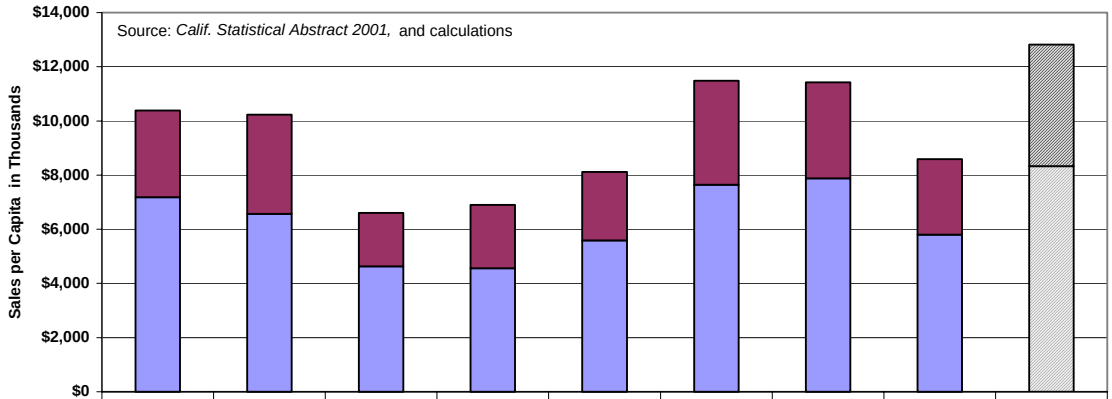
Taxable Sales, 2000



Taxable sales per capita in all of the San Joaquin Valley counties are below the statewide figure.

Chart 4-7

Taxable Sales Per Capita, 2000



	Fresno	Kern	Kings	Madera	Merced	San Joaquin	Stanislaus	Tulare	California
Other	$3,202	$3,658	$1,975	$2,340	$2,531	$3,827	$3,544	$2,786	$4,489
Retail	$7,175	$6,567	$4,627	$4,558	$5,585	$7,648	$7,884	$5,804	$8,326

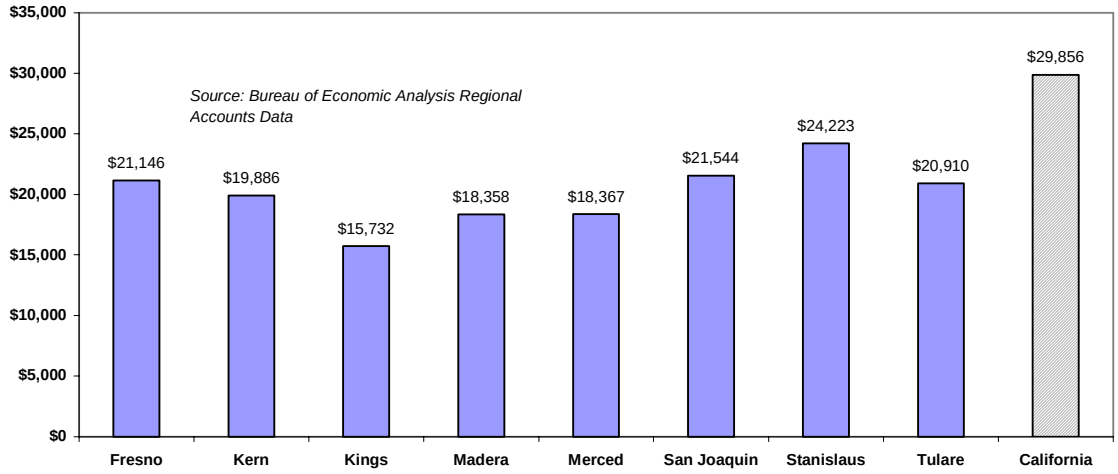
5. Income, Unemployment, and Poverty Indicators

PERSONAL INCOME

Per capita personal income varies in the eight San Joaquin Valley counties, but all fall below California as a whole.

Chart 5-1

Per Capita personal income, 1999 (BEA)



For comparison, the population of California's metropolitan areas has a per capita personal income (1999 data) of $30,164, and that of the nonmetropolitan areas has a per capita personal income of $20,830. Among counties, San Francisco ($49,464), San Mateo ($47,146) and Santa Clara ($46,649) lead the list and would be off the scale of the chart above, while Kings ($15,732) has the lowest per capita personal income among California counties. Differences in cost of living from county to county – housing costs especially – make direct comparison of purchasing power or living standards difficult.

UNEMPLOYMENT

Unemployment tends to be higher than the California average in the counties of the San Joaquin Valley.

As the chart 5-2 and table 5-1 show, this is a pattern repeated year after year. Illustrated are a few recent years, 1998 to 2001, plus 1995 and 1990. In every case, every San Joaquin Valley county has a higher unemployment figure than the state as a whole. Coming during recovery from a statewide recession, 1995 was particularly weak on this measure, statewide and in each of the counties.

Chart 5-2

Unemployment Consistently Higher in San Joaquin Valley Counties than State Average, 1990, 1995, 1998-2001

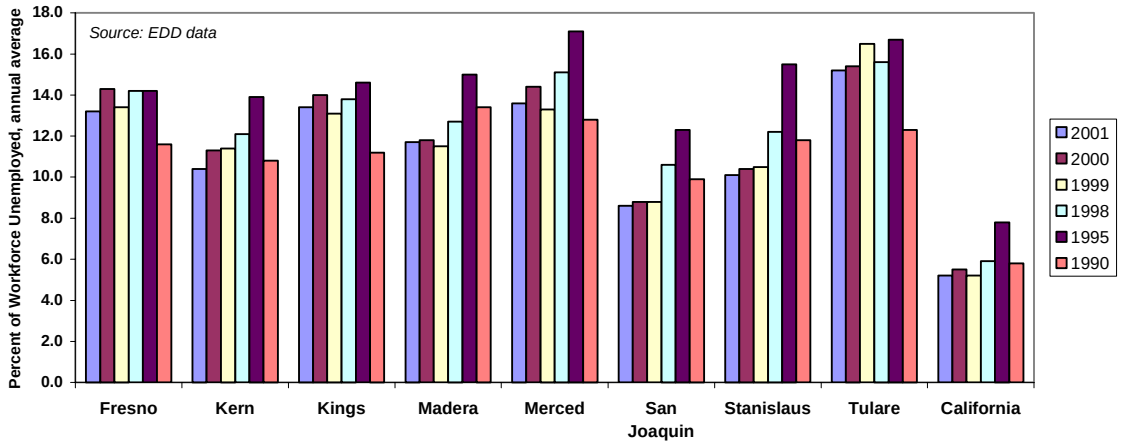


Table 5-1

Unemployment Rate, Annual Averages

	2001	2000	1999	1998	1995
Fresno	13.2	14.3	13.4	14.2	14.2
Kern	10.4	11.3	11.4	12.1	13.9
Kings	13.4	14.0	13.1	13.8	14.6
Madera	11.7	11.8	11.5	12.7	15.0
Merced	13.6	14.4	13.3	15.1	17.1
San Joaquin	8.6	8.8	8.8	10.6	12.3
Stanislaus	10.1	10.4	10.5	12.2	15.5
Tulare	15.2	15.4	16.5	15.6	16.7
California	*5.2*	*5.5*	*5.2*	*5.9*	*7.8*

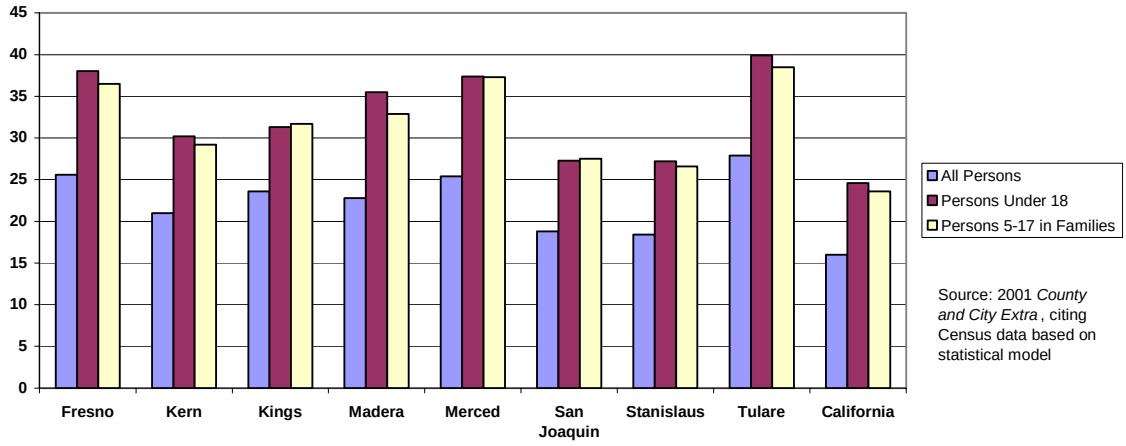
These annual averages disguise considerable month-to-month variation in the raw (not seasonally adjusted) unemployment percentage figures for the counties of the San Joaquin Valley. Monthly variations in the state as a whole are much smaller, but still not insignificant.[8] The seasonality of agriculture and greater dependence of the Valley on agriculture contribute to higher volatility in this measure during most years.

POVERTY

Poverty, like unemployment, is more frequent in the San Joaquin Valley than the California average. The percentage below the poverty level of all persons, of persons under age 18, and of persons age 5 to 17 in families is higher (that is, poverty more frequent) in all of the San Joaquin Valley counties than in the state as a whole.

Chart 5-3

San Joaquin Valley Counties have Higher Percentage of Persons Below Poverty Level (1997) than State Average

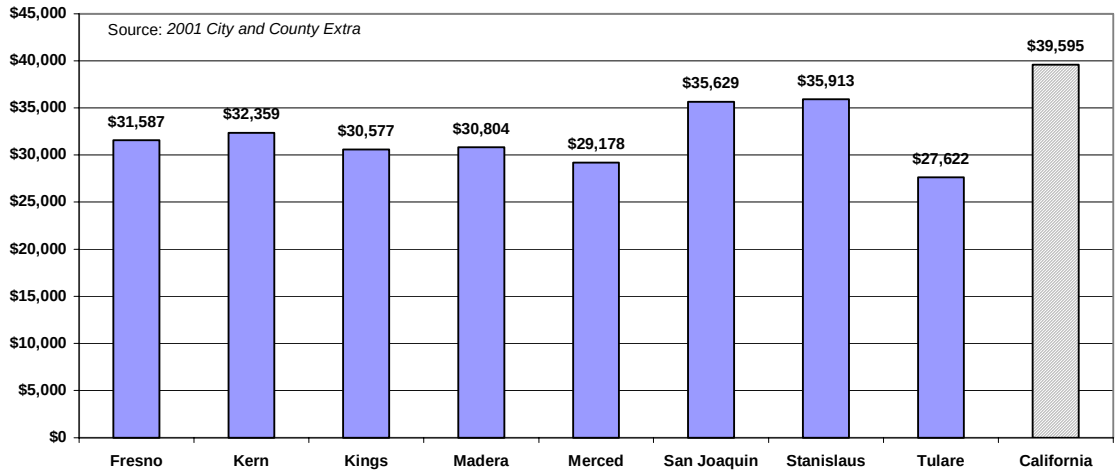


Source: 2001 *County and City Extra* , citing Census data based on statistical model

Looking at a related measure, median household income is lower in the San Joaquin Valley Counties than in the state as a whole. (Half fall above the median and half below.)

Chart 5-4

Median Household Income, 1997: San Joaquin Valley Counties Below State Average



Note that this measure, *household* income, is not the same as *per capita* income, for which 1999 figures were shown previously, because average household size differs from one county to another. As noted above regarding per capita income, direct comparisons from one county to another are difficult, as cost of living varies, especially for the housing component.

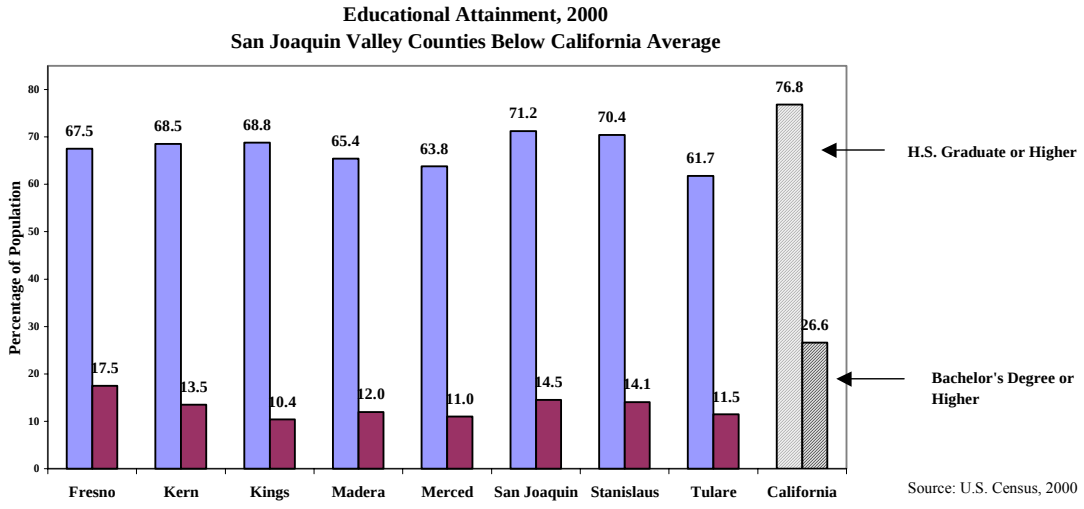
6. Education

This section summarizes educational attainment levels and selected other educational measures in the counties of the San Joaquin Valley.

EDUCATIONAL ATTAINMENT: HIGH SCHOOL AND COLLEGE GRADUATES

Chart 6-1 shows 2000 Census educational attainment figures for population age 25 and over. The chart shows both the percentage of population that is high school graduate or higher and the percentage that has a bachelor's degree or higher. By these measures, especially bachelor's degree, educational attainment in the San Joaquin Valley counties lags the state.

Chart 6-1

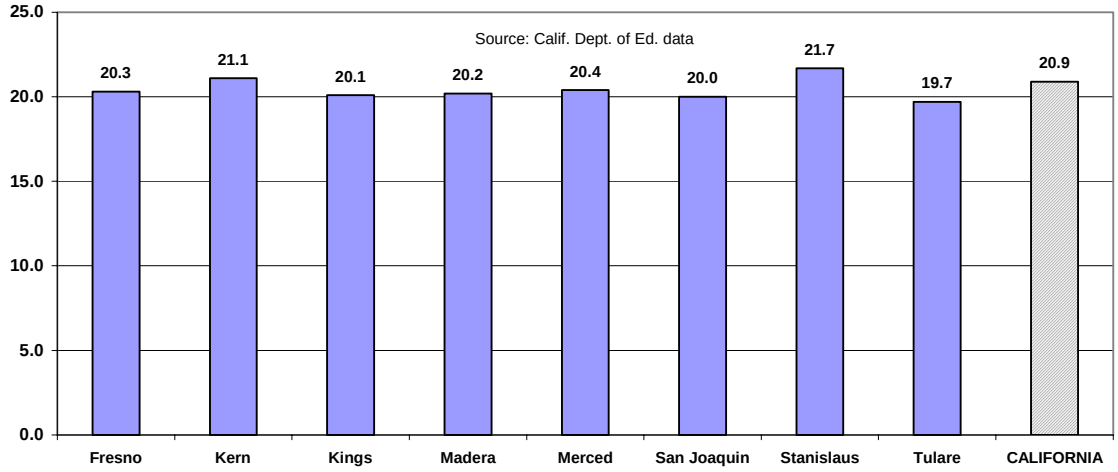


PUPILS PER FULL TIME EQUIVALENT TEACHER

The counties of the San Joaquin Valley do not vary sharply from the statewide norm on this measure for grades Kindergarten to 12, although one, Stanislaus, is 0.8 students per full time equivalent teacher above the statewide average, and Tulare is 1.2 lower (where lower is desirable).

Chart 6-2

Pupils per Full Time Equivalent Teacher, 1999-2000

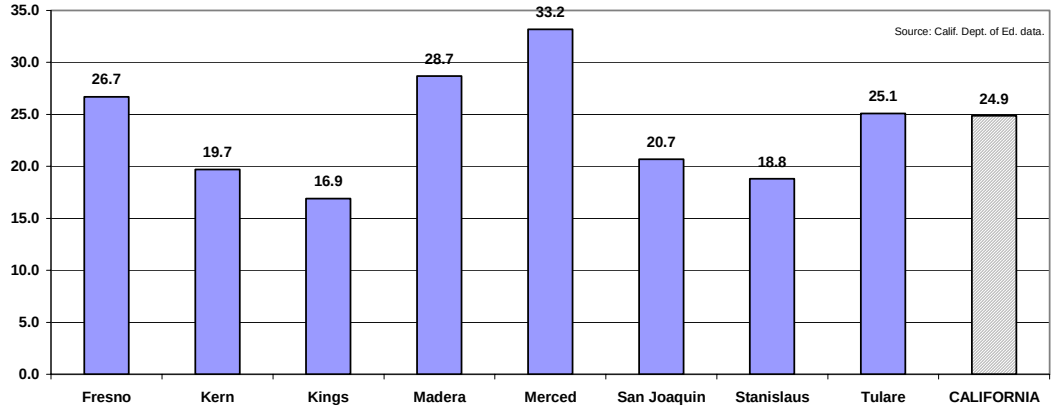


ENGLISH LEARNERS

The counties of the San Joaquin Valley vary above and below the statewide average for percentage of students who are English learners.

Chart 6-3

English Learners, Percent of Enrollment, 1999-2000, Spring Count



STAR RANKINGS

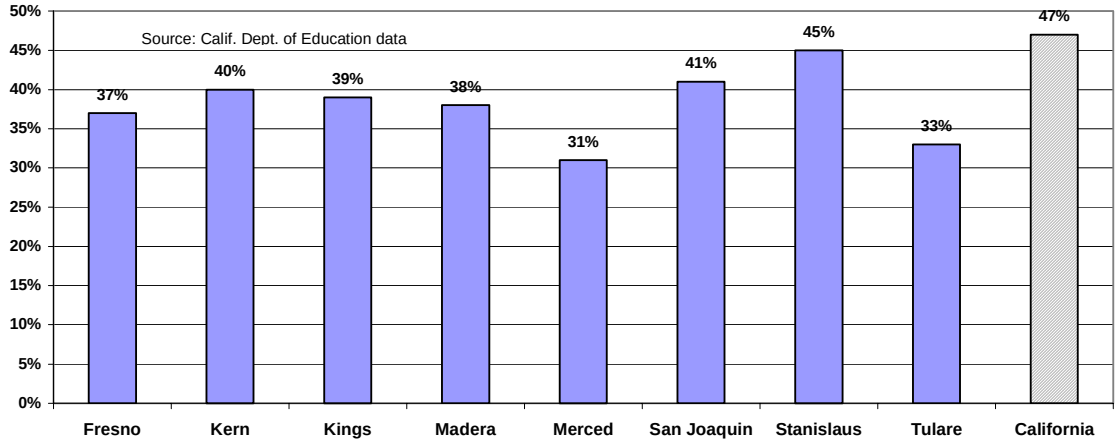
The Standardized Testing and Reporting (STAR) system is a means for comparing performance among schools and areas. Data are available for 4th grade reading scores and for 8th grade mathematics scores. In each case, the data show the percentage of students with reading scores at or above the 50th national percentile ranking on that test. This is a comparative measure only. A score higher than the 50th percentile indicates better performance than the nation as a whole, and score lower than the 50th percentile

indicates poorer performance than the nation as a whole. A score of exactly the 50th percentile indicates performance in line with the nation as a whole.

All of the San Joaquin Valley counties are below the state figure on the 4th grade reading measure, and California as a whole is below the national level.

Chart 6-4

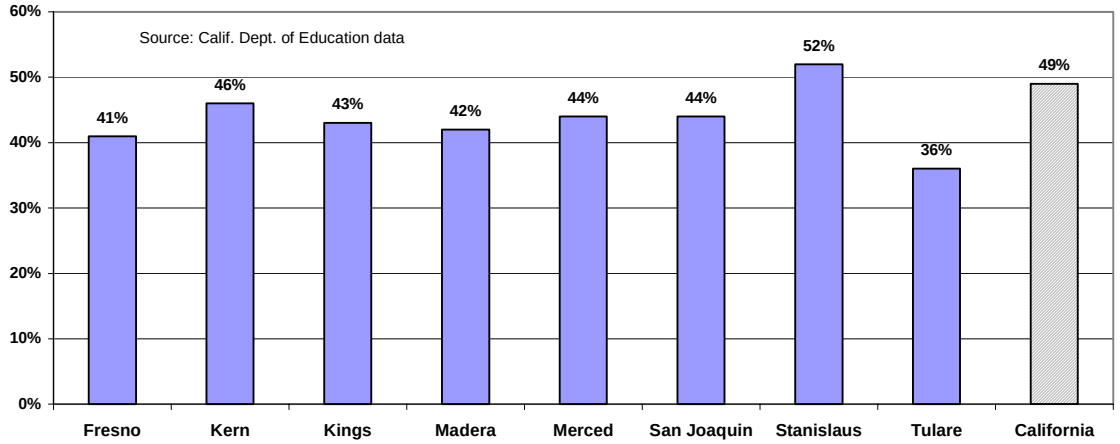
Percentage of 4th Graders with Reading Scores at or Above 50th National Percentile Ranking, 2001



On the 8th grade mathematics measure, Stanislaus County's figure exceeds state and nation, although the other counties are below the California figure, which in turn is slightly below the national figure.

Chart 6-5

Percentage of 8th Graders with Math Scores at or Above 50th National Percentile Ranking, 2001

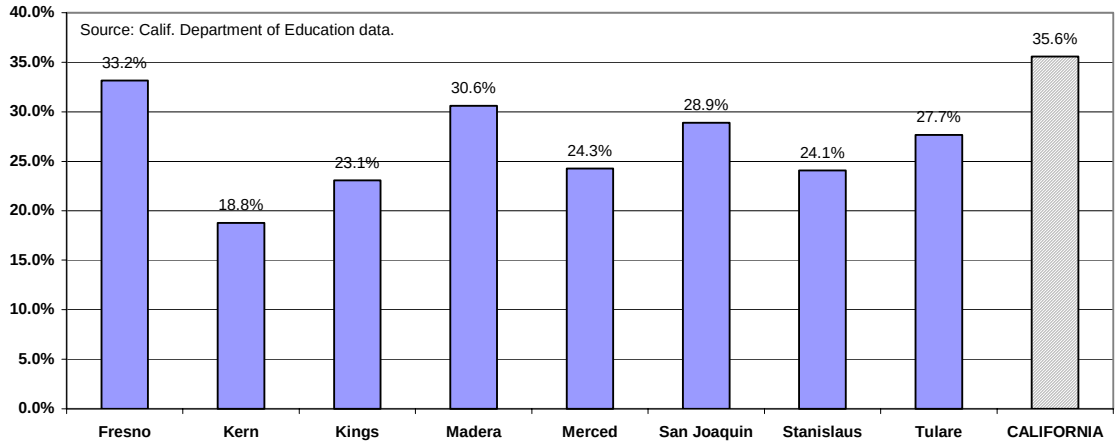


COLLEGE BOUND: PERCENTAGE ELIGIBLE FOR UC-CSU

The California Department of Education provides statistics on the number of graduates who have completed all high school courses required for UC-CSU admission. The percentage meeting requirements allows comparison of college preparation, although it should be remembered that many students go from high school to community college, for which it is not necessary to have met UC-CSU admission requirements.

Chart 6-6

Percentage of Graduates Who have Completed All H.S. Courses required for UC-CSU Admission, 2000-2001



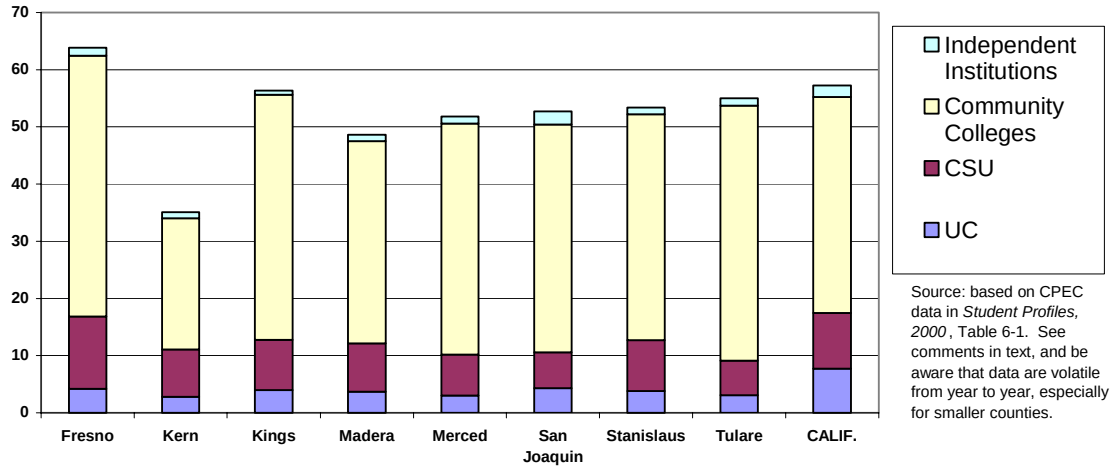
Fresno, at 33.2 percent (2000-2001 data), is 2.4 percentage points below the state average of 35.6 percent. Madera, at 30.6 percent, is 5.0 percentage points below the state average, and San Joaquin, at 28.9 percent is 6.7 percentage points below. The other counties are farther behind the state average on this measure of college preparation, with Kern the lowest at 18.8 percent. Fresno, Kern, and Stanislaus, are home to CSU campuses, although Fresno ranks relatively high on this measure of college preparation and Kern (18.8 percent) and Stanislaus (24.1 percent) rank relatively low. It should be noted that the percentage is somewhat volatile from year to year for some counties.

COLLEGE EDUCATION

The percentage of graduating high school students moving on to college the next fall varies from county to county. The figures for most of the San Joaquin Valley counties are below the state average. However, these figures can vary significantly from year to year, and are especially volatile for smaller counties. Data problems make the numbers after 1997 very unreliable for some counties, so chart 6-7 reflects 1997 data.

Chart 6-7

Percentage of Recent High School Graduates Enrolling in Higher Education, 1997



Source: based on CPEC data in *Student Profiles, 2000*, Table 6-1. See comments in text, and be aware that data are volatile from year to year, especially for smaller counties.

The corresponding figures are shown in table 6-1.

Table 6-1

	Percentage of recent H.S. Graduates Enrolling as Freshmen, 1997				
County	**UC**	**CSU**	**Community Colleges**	**Independent Institutions**	**Total**
Fresno	4	13	46	1	64
Kern	3	8	23	1	35
Kings	4	9	43	1	56
Madera	4	8	35	1	49
Merced	3	7	40	1	52
San Joaquin	4	6	40	2	53
Stanislaus	4	9	40	1	53
Tulare	3	6	45	1	55
CALIF.	*8*	*10*	*38*	*2*	*57*

Statewide figures include "first-time freshmen from unknown high schools in unknown counties," and may be slightly above actual total.

Community college pct. for Kern increased significantly in 1998 and 1999; 1997 figure may not be representative.

Although these figures must be used with caution, it does appear that:

- UC attendance is relatively low among graduating high school students in the San Joaquin Valley counties
- CSU attendance is closer to the statewide average
- Community college attendance tends to be similar to statewide norms, or higher, although year-to-year variations make patterns less than fully clear
- Community colleges are an important element of higher education in the San Joaquin Valley counties

These figures do not account for students who might go on to higher education after a delay, or those who move to a different segment from the one in which they began their college careers. The figures include only those who go on to college in the fall following graduation from high school.

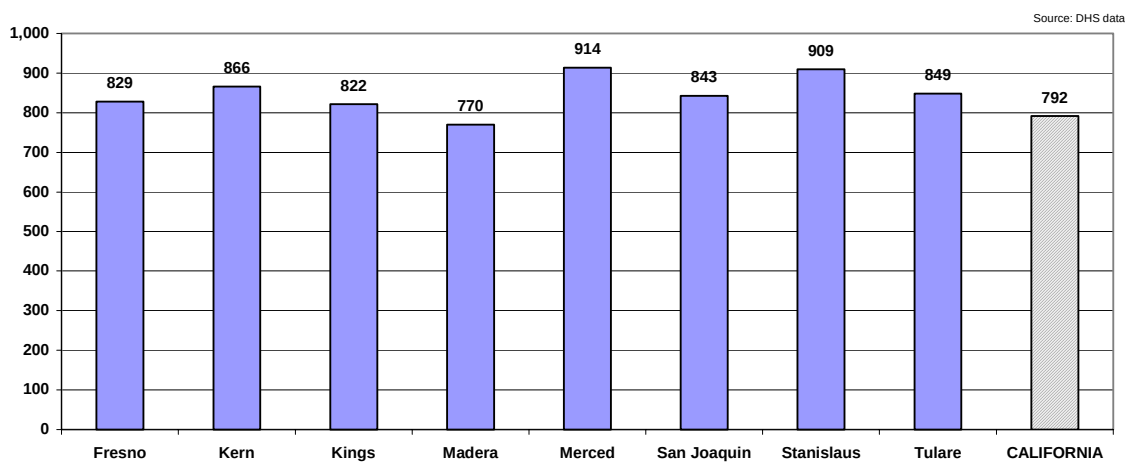
It seems reasonable to expect an increase in UC attendance among graduating San Joaquin Valley high school students after the new campus opens at Merced, although it will take years for the full impact to develop.

7. Health and Medical Care

DEATH RATES

The broadest measure of the health of a population may be the age-adjusted death rate. By that measure, most of the counties of the San Joaquin Valley do not fare as well as California as a whole.

Chart 7-1



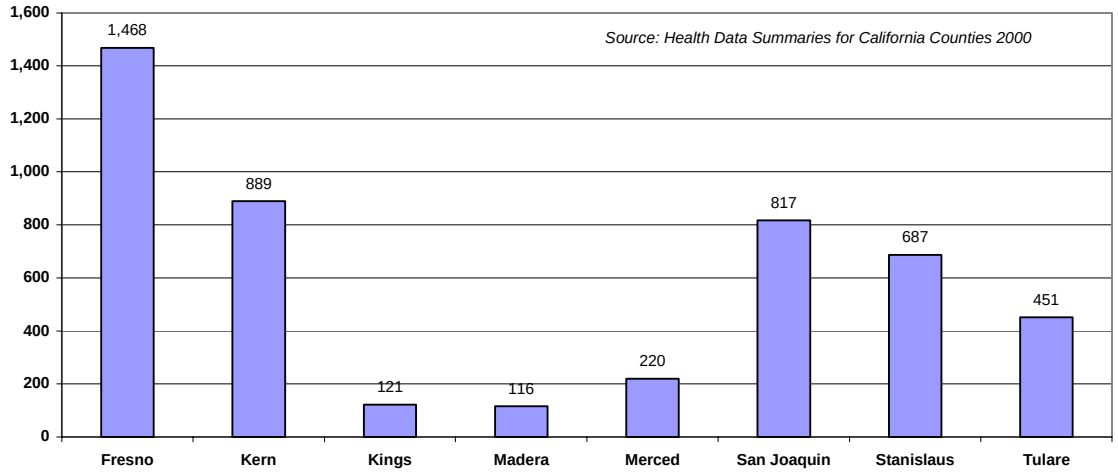
The age-adjusted death rate figures are higher than those for the earlier period shown in the *Statistical Tour – 1998*. This reflects a change in the basis for calculating the rate, not a change in real death rates.[9] Age-adjusted death rates vary widely, even among counties with "reliable" rates.[10] Given the size of the confidence levels for the data (the range in which the "real" figures probably lie), the county-to-county differences in the chart above do not appear to be striking. But the tendency is nonetheless toward a higher death rate than in the state as a whole.

PHYSICIANS AND HOSPITAL BEDS

The number of active non-federal physicians varies widely among the counties, although this is to be expected with such widely differing county populations.

Chart 7-2

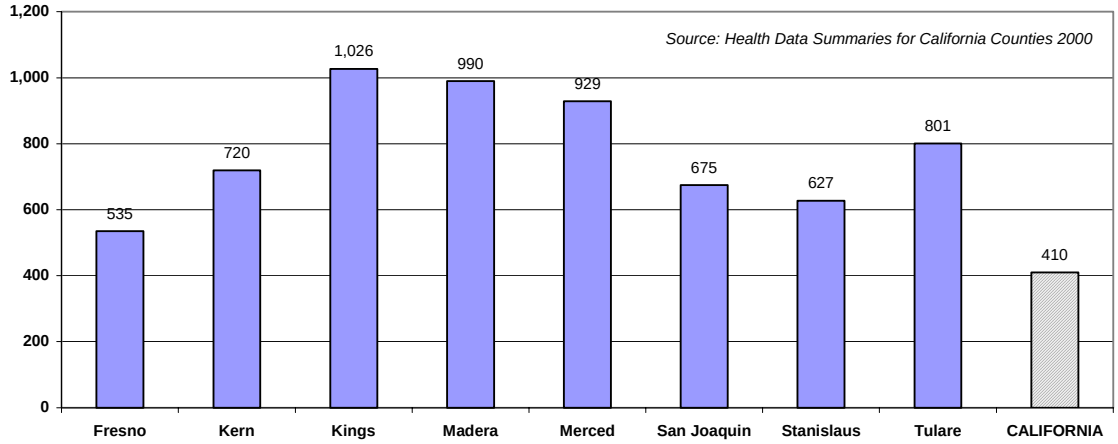
Number of Active Non-Federal Physicians (2000)



In terms of persons per physician, which is one measure of access to medical care, the differences are still large. In every case the number is higher – sometimes much higher – than for the state as a whole.

Chart 7-3

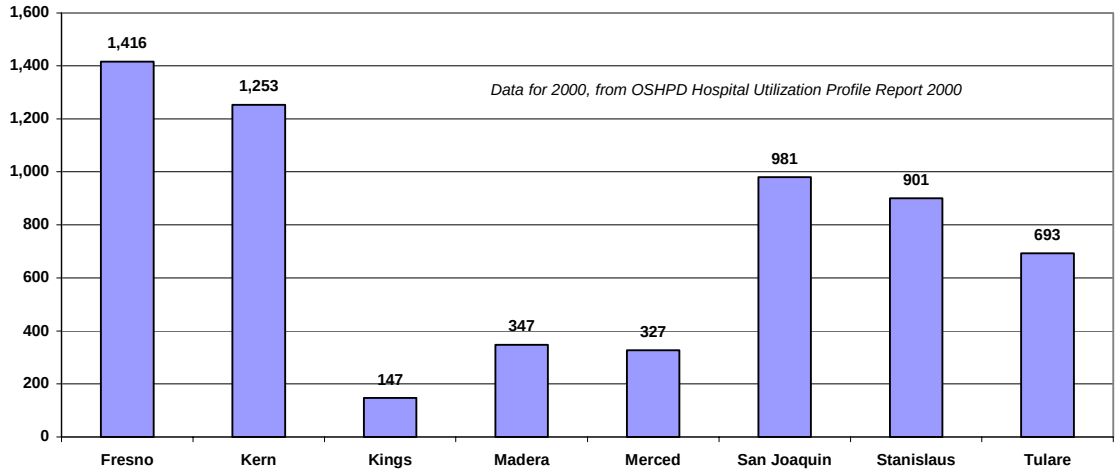
San Joaquin Valley Counties have more Persons per Physician than California Average (2000)



Similarly, the number of hospital beds varies widely among the counties.

Chart 7-4

Licensed General Acute Care Beds Vary Per County



Licensed general acute care beds per 1,000 population also varies. Only Madera County (least populous among the eight) exceeds the statewide average, although Stanislaus is very close to the statewide figure, and Tulare and Kern are not far behind that.

Chart 7-5

Licensed General Acute Care Beds Per 1000 Population (2000):
Most San Joaquin Valley Counties Below State Average

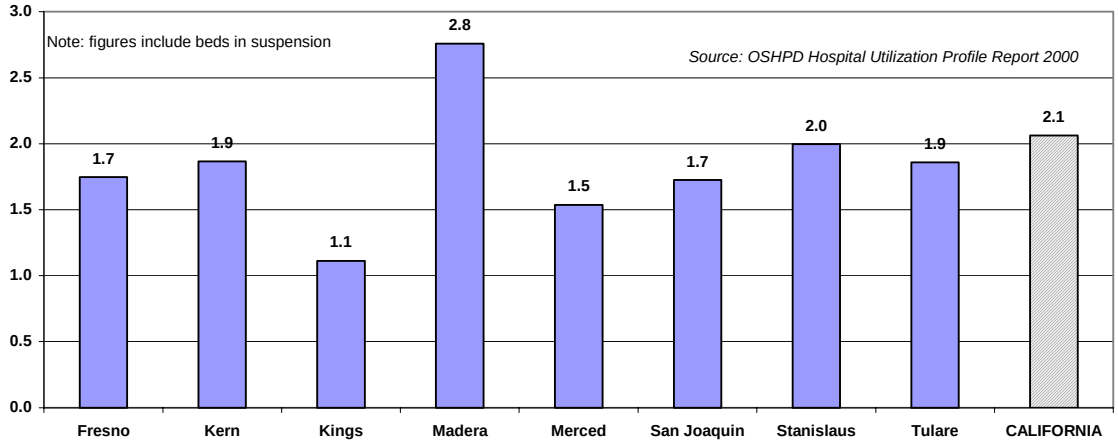
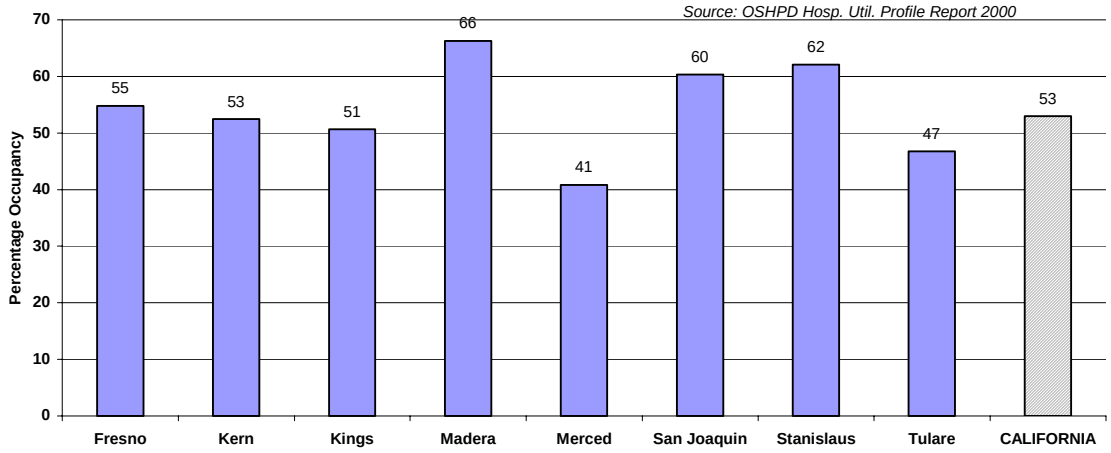


Chart 7-6

Licensed Acute Care Bed Occupancy Rate (2000) Varies:
Some Above, Some Below State Average

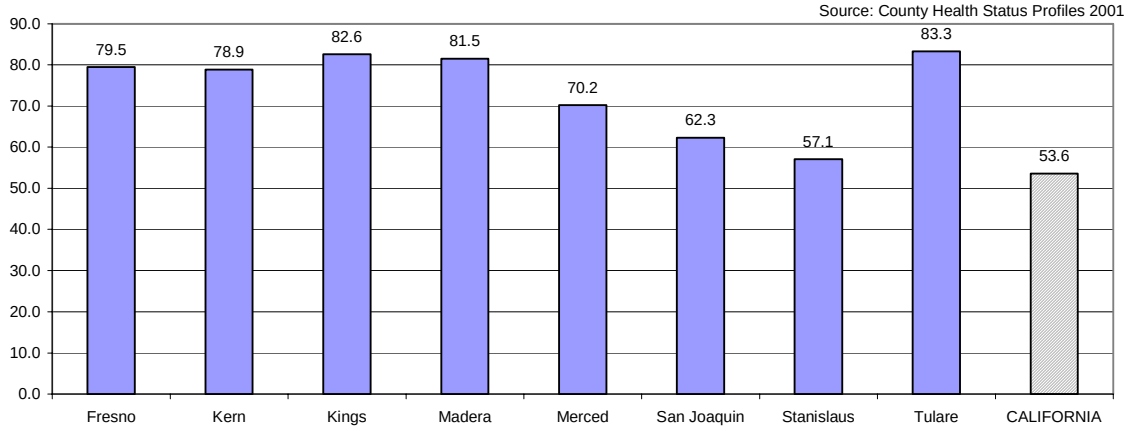


BIRTHS TO ADOLESCENTS

The counties of the San Joaquin Valley have higher birth rates to teen mothers than does California as a whole, although San Joaquin County is only a little higher than the statewide figure. This statistic is an indicator of likelihood of reduced educational opportunity and higher chance of poverty.

Chart 7-7

Births to Adolescent Mothers, 15-19 Years Old
Per 1,000 Live Births
Three-Year Average, 1997-99



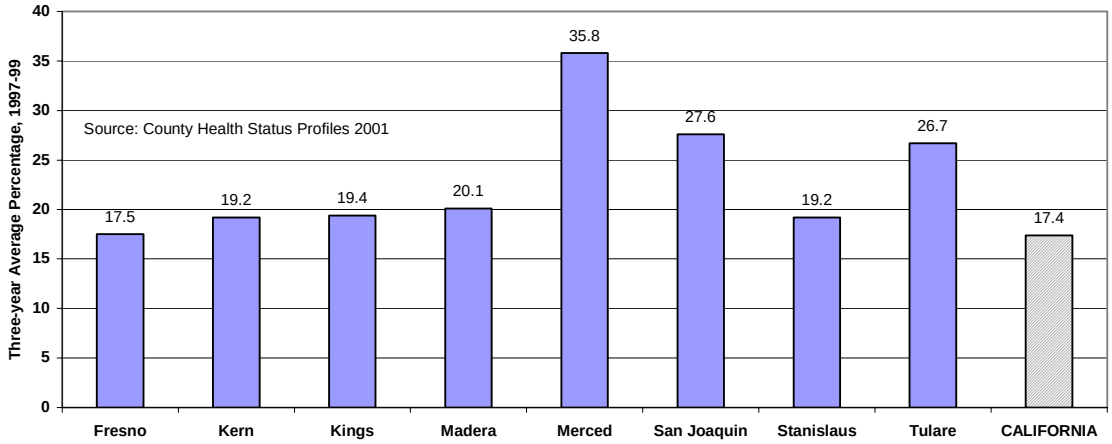
PRENATAL CARE

It is important that prenatal care be started early in a pregnancy. Early care can contribute to the best outcomes for baby and mother. The counties of the San Joaquin

Valley have higher percentages than the state as a whole of prenatal care not begun during the first trimester of pregnancy.

Chart 7-8

Percentage Not Beginning Prenatal Care During the First Trimester of Pregnancy: San Joaquin Valley Counties Higher than California Average

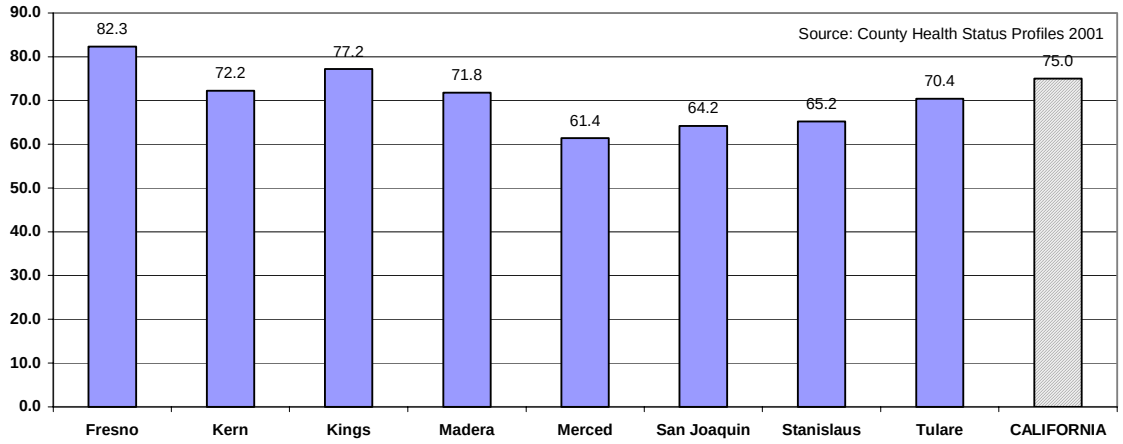


The *lower* the number on chart 7-8, the better: a small number indicates a small percentage delaying prenatal care past the first trimester. Four of the eight counties are within two percentage points of California as a whole, another within three percentage points, and two much higher (poorer performance on this measure), notably Merced.

Another view of prenatal care is the percentage of mothers receiving "adequate" or "adequate plus" prenatal care, as measured by an "adequacy of prenatal care utilization index" (Chart 7-9). The *higher* the number on this rating the better. To be adequate or adequate plus, the care should begin "by the fourth month of pregnancy and [include at least] 80 percent of the expected number of prenatal care visits recommended by the American College of Obstetricians and Gynecologists."[11]

Chart 7-9

"Adequate/Adequate Plus" Prenatal Care Percentage
Three-year Average, 1997-99



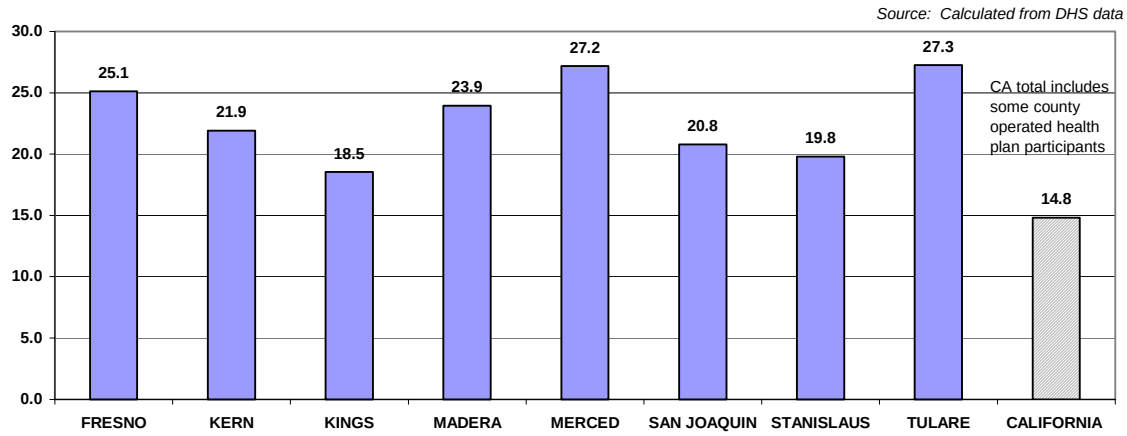
Only Fresno and Kings exceed the statewide average on this measure, which itself falls well below the national objective of 90.0 for 2010.

MEDI-CAL

Medi-Cal, California's Medicaid program, serves a higher proportion of residents of the San Joaquin Valley counties than of California as a whole.

Chart 7-10

Average Monthly Medi-Cal Fee-for-Service Eligibles plus
Medi-Cal Prepaid Health Plan Enrollees
as Percentage of Population, 1998

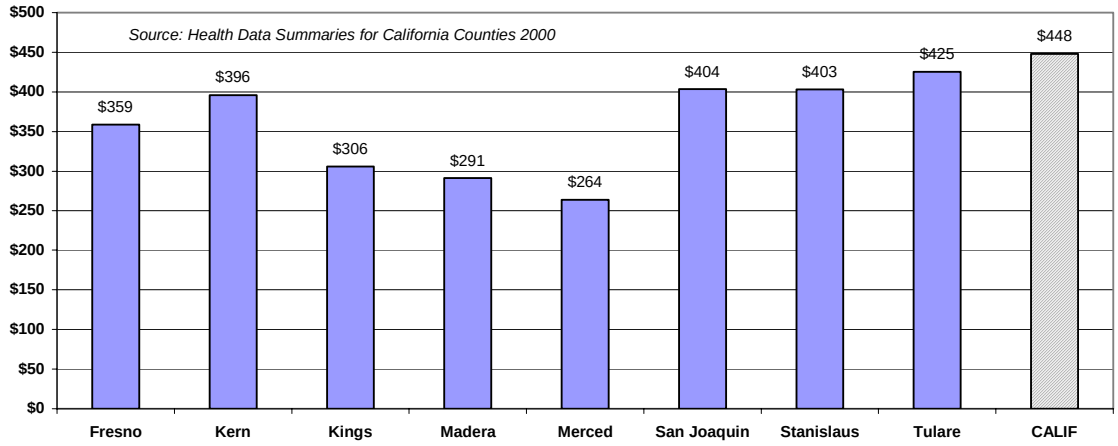


The figure for California includes participants in some county operated health plans, none of which is in the San Joaquin Valley counties.

Average Medi-Cal fee-for-service payment per user is less in the San Joaquin Valley counties than in California as a whole. Note that the figure reflects "total average monthly payments made to providers [in the respective areas] for services they provided to Medi-Cal users; fee for service only."[12] This figure would be expected to be relatively low in counties that lack the higher-cost specialized services found in a few counties and in counties with a high proportion of non-fee-for-service users.

Chart 7-11

Average Monthly Medi-Cal Payments Per User
Less in San Joaquin Valley Counties than California Average

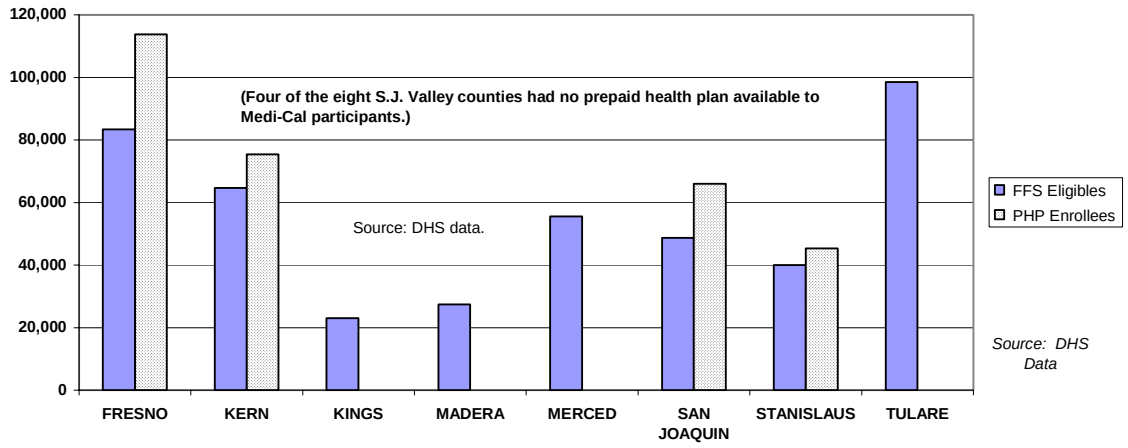


Four of the San Joaquin Valley counties have prepaid health plans (PHPs) to serve Medi-Cal participants, and four do not. In counties with PHPs, a majority of Medi-Cal participants are enrolled in those plans.

In the San Joaquin Valley counties, about half to three-quarters of those eligible for Medi-Cal fee-for-service participation use services in a given month. The proportion varies from county to county. Statewide, the proportion for 1998 was just under two-thirds. Where PHPs or county operated health programs are available, they are an important part of the system, but figures are not available on how many PHP enrollees use services on average per month. (There are no county-operated health programs in the San Joaquin Valley counties.)

Chart 7-12

Average Monthly Number of Medi-Cal Fee for Service Eligibles and Prepaid Health Plan Enrollees, 1998



Source: DHS Data

8. Crime

Over the past decade, crime rates have tended to fall in California and in the counties of the San Joaquin Valley, although the trend has not been consistent in every case. For example, violent crimes rose in Kings County over the period 1991-96 (but with a small decline in 1993), and then declined sharply from 1997 to 2000. Madera County showed an even more pronounced rise, followed by a declining trend. For that reason, these graphs for the year 2000 should be viewed only as one-year snapshots.

The data reflect the California Crime Index. Violent crimes are homicide, forcible rape, robbery, and aggravated assault. Property crimes are burglary and motor vehicle theft.

Chart 8-1

Violent Crimes per 100,000 Population, 2000

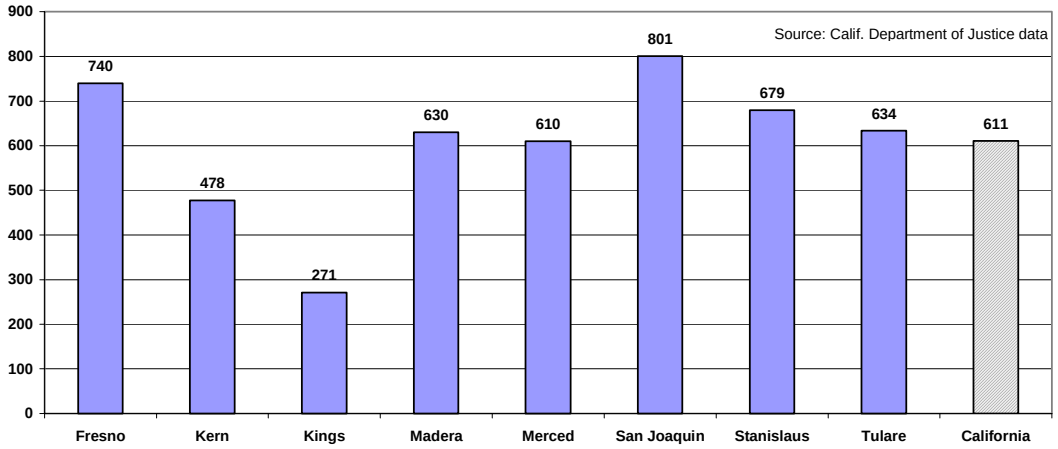
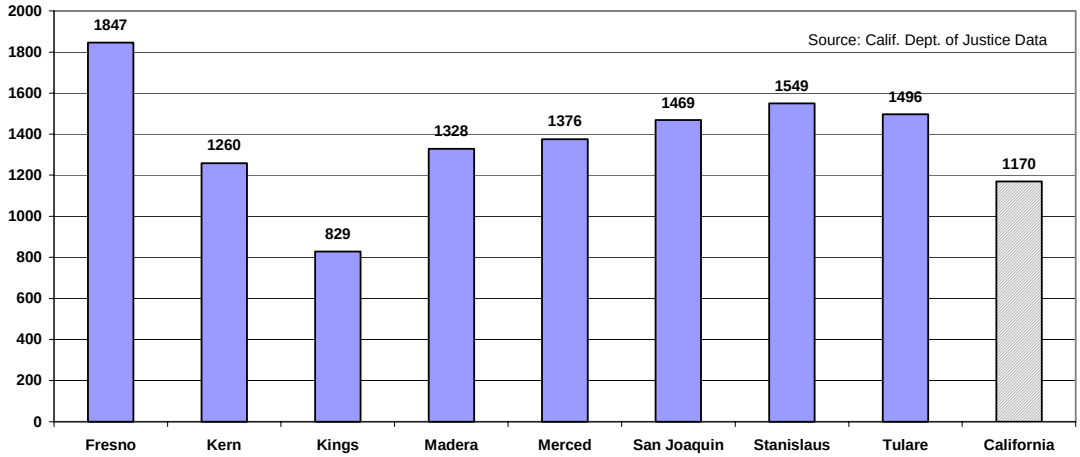


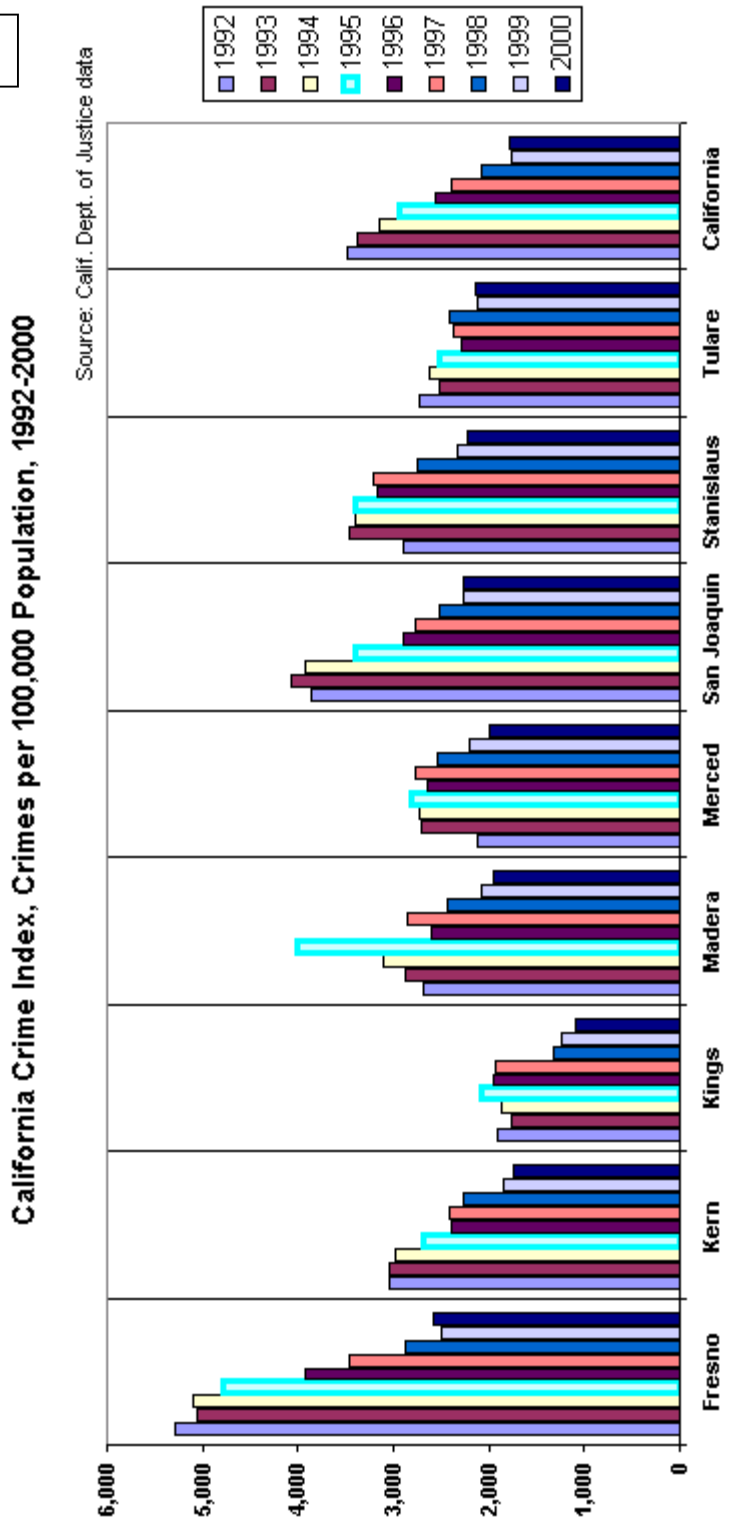
Chart 8-2

Property Crimes per 100,000 Population, 2000



Rates in 2000 tended to be higher in the counties of the San Joaquin Valley than in California as a whole, but with some exceptions, especially Kings County and to a lesser extent Kern County.

Chart 8-3



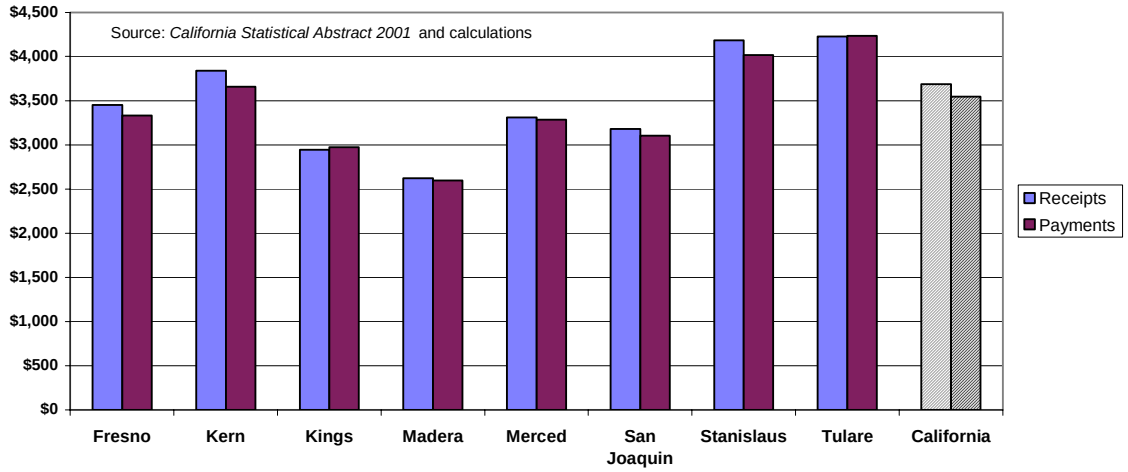
9. Government Receipts and Payments

LOCAL GOVERNMENT AS A WHOLE: COUNTIES, CITIES, SCHOOLS, SPECIAL DISTRICTS, AND REDEVELOPMENT AGENCIES

Receipts and expenditures for all of the jurisdictions within each of the counties vary, with some exceeding and some falling below statewide per capita figures. (Figures are for 1997-98.)

Chart 9-1

Per Capita County/Local Government Receipts and Payments, 1997-98

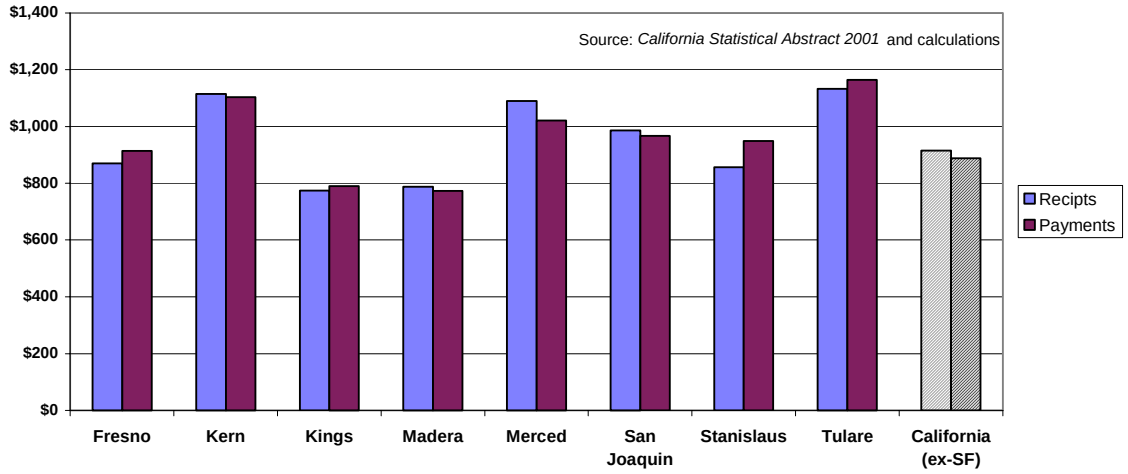


COUNTY GOVERNMENT RECEIPTS AND PAYMENTS

For counties only (excluding cities and other entities), county receipts and payments per capita in the San Joaquin Valley counties do not have a consistent pattern in comparison to the statewide figures. (Figures are for 1998-99.)

Chart 9-2

County Government Receipts and Payments per Capita, 1998-99



Note that San Francisco is considered a city rather than a county for purposes of the receipts and payments charts (9-1 and 9-2) and for purposes of the bonded indebtedness charts (9-3 and 9-4). Unique in California in this respect, San Francisco is both a city and a county.

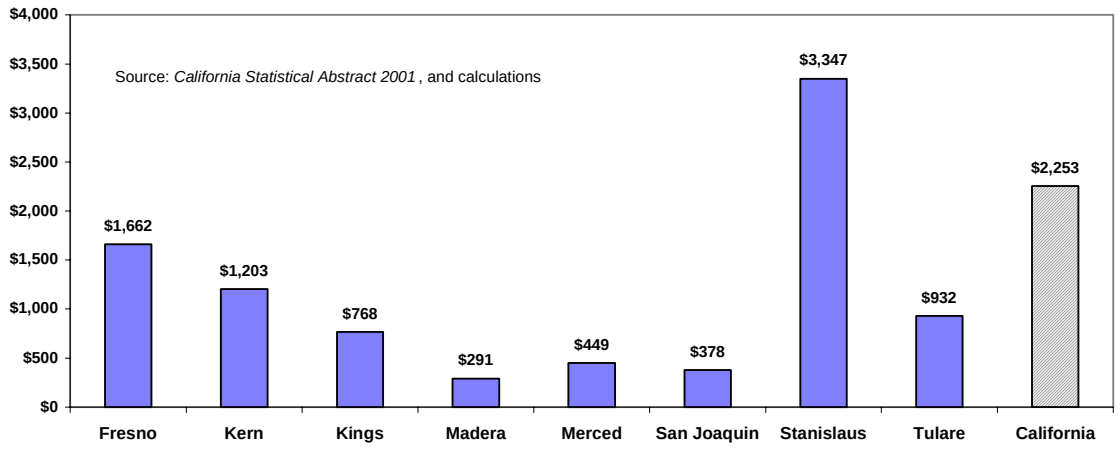
Kings and Madera counties are at the low end on both charts, with the lowest receipts and payments per capita both for all local governments and for county governments exclusively.

BONDED INDEBTEDNESS

Bonded indebtedness per capita varies widely among the San Joaquin Valley counties, with most below the statewide average (chart 9-3). Stanislaus is an exception, but several other counties in California have higher figures on this measure.

Chart 9-3

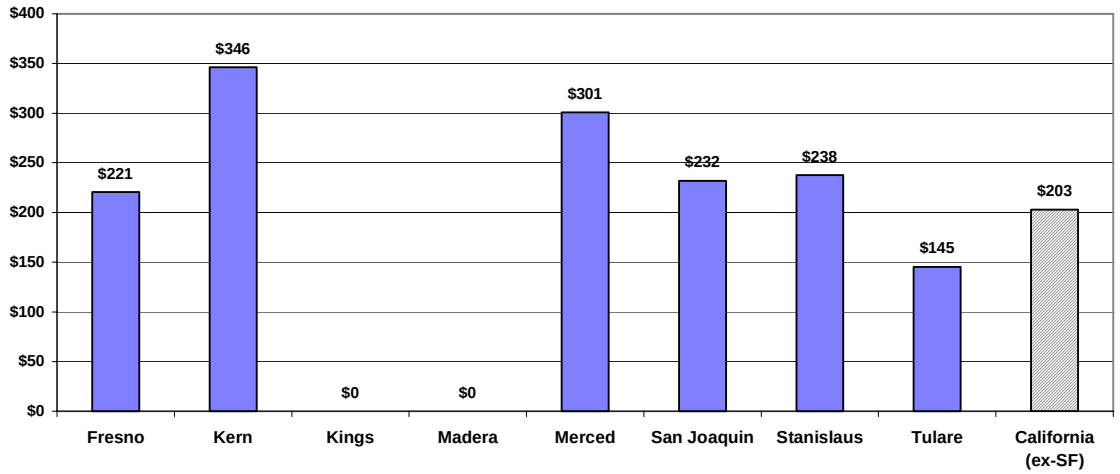
Bonded Indebtedness per Capita of Counties, Cities, Schools, Special Districts, and Redevelopment Agencies, 1997-98



County-only bonded indebtedness shows a different pattern (chart 9-4). Here again, San Francisco is omitted from the statewide figure. Note that the county figures are for 1998-99, one year more recent than the 1997-98 figures for all local government entities.*

Chart 9-4

County Bonded Indebtedness per Capita, 1998-99



It is clear that most bonded indebtedness is associated with cities, schools, special districts, and redevelopment agencies, not with county governments.

* Apparently counties report these data earlier than other local governments, or processing of the data is simply completed sooner by the Controller's Office.

Because there are enormous differences in bonded indebtedness figures among the counties of California, nothing significant can be made of this information for the San Joaquin Valley counties in particular except that those counties, like others in the state, vary widely.

10. Transportation

ROADS

The entire Central Valley is connected along two main arteries: State Highway 99 and Interstate 5. Heading south, the two roads meet at a point several miles south of Bakersfield. Going north from that point, Highway 99 diverges to the east and Interstate 5 (I-5) to the west, and the two form generally parallel paths that approach one another in Sacramento, diverging again on the way north. Highway 99 meets up again with I-5 in Red Bluff, and ends at that point, while I-5 stretches onward to the northern end of the Great Central Valley, and then beyond into Oregon and Washington. To the south of Bakersfield, I-5 goes through Los Angeles and all the way to Mexico.

Numerous relatively small roads (small in comparison to freeways), provide east-west connections in the San Joaquin Valley. In particular, there is a web of connections between I-5 and Highway 99. Mountain ranges to the east and west constrain connections outside the valley. Connections west are more abundant, as the Sierra Nevada range is a formidable barrier.

Interstate 205 provides a major route from Manteca and thus the greater Stockton area to the San Francisco Bay area. State Route 152 connects Chowchilla, on Highway 99, to Interstate 5, via Los Baños, and then heads west toward Gilroy (meeting U.S. 101 there) and Watsonville, and there connects to Highway 1, the Coast Highway. Other connections are smaller roads, often very scenic but somewhat far between. State Route 46, for example, heads to the west from Famoso on Highway 99, passing through Lost Hills on I-5, and eventually joining U.S. 101 at Paso Robles.

Clearly, the strength of the San Joaquin Valley's road system is north-south.

RAIL TRANSPORTATION*

Union Pacific owns the main freight railroad line through the Central Valley. This route is parallel to, and often visible from, Highway 99. Another railroad line, the Atchison, Topeka, and Santa Fe, generally runs a few miles to the east of the Southern Pacific line. A spur line breaks from the main route and follows a path east of Highway 99 from Bakersfield to Fresno. It is along this line that Amtrak passenger trains run.

Amtrak's San Joaquin trains begin their runs in Bakersfield and proceed north along the western AT & SF route to Fresno via Wasco, Corcoran, and Hanford. At Fresno, Amtrak trains run along the main AT & SF line to Stockton, making intermediate stops at Madera, Merced, Turlock, and Modesto. At Stockton, four Amtrak trains daily continue their westbound trip along AT & SF tracks through Antioch to Martinez, where the San

* This section, used here by permission, was prepared by James D. Umbach, a graduate of California State University, Sacramento, who has a long-standing interest in public transportation issues.

Joaquin route then switches to track owned by Southern Pacific for the rest of its trip to Oakland. One trip each direction continues north to the capital, with an additional stop at Lodi. Due to ever-increasing ridership and the popularity of the San Joaquins line, Amtrak recently began requiring advance reservations for any trip along the route. (More information, including schedules, can be found at http://www.amtrakcalifornia.com.)

Residents of the northern San Joaquin Valley have a rail option for their commutes to the Bay Area. The Altamont Commuter Express, or ACE, began operations in 1998. ACE carries passengers to the Silicon Valley from Stockton, with stations in Lathrop, Tracy, Vasco, Livermore, Pleasanton, Fremont, Great America, and San Jose. There are currently three trains each direction, operating during commute hours. (ACE's web site is at http://www.acerail.com.)

The California High-Speed Rail Authority is currently preparing a final draft of a plan for a high-speed rail line in the state. The 700-mile-long system, which could run at speeds approaching 200 miles per hour, is expected to carry 15 million passengers between the Southland and the Bay Area annually by 2015. Commencing at Los Angeles's Union Station, trains would travel north to Burbank, Santa Clarita, Bakersfield, Visalia, Fresno, Los Baños, Gilroy, San Jose, Redwood City, and San Francisco Airport, before ending in downtown San Francisco. A possible extension would go from Fresno north to Sacramento, via Merced, Modesto, and Stockton. A possible southern extension would include stops at Norwalk, Anaheim, Irvine, Oceanside, and San Diego. There, a separate line would loop north back toward Los Angeles, with several stations in San Diego, Riverside and San Bernardino Counties, including one at Ontario Airport. The authority is considering several methods of funding the project, including sales tax increases, motor vehicle surcharges, private investment, and airport facility charges. For more information, please see the California High Speed Rail Authority's web site at http://www.cahighspeedrail.ca.gov.

COMMERCIAL AVIATION: PASSENGER AND CARGO

Commercial aviation is not a major part of the San Joaquin Valley, although some airports, including those at Bakersfield, Fresno, and Modesto, provide some commercial passenger service and Fresno provides cargo service.

Chart 10-1 shows data for passenger traffic for 2000 for California commercial airports with over 250,000 passengers (measured by emplanements and deplanements). The two airports in the San Joaquin Valley counties above that threshhold (Bakersfield and Fresno, marked by arrows on the chart) have only a small part of air passenger traffic for the state.[13]

Chart 10-1

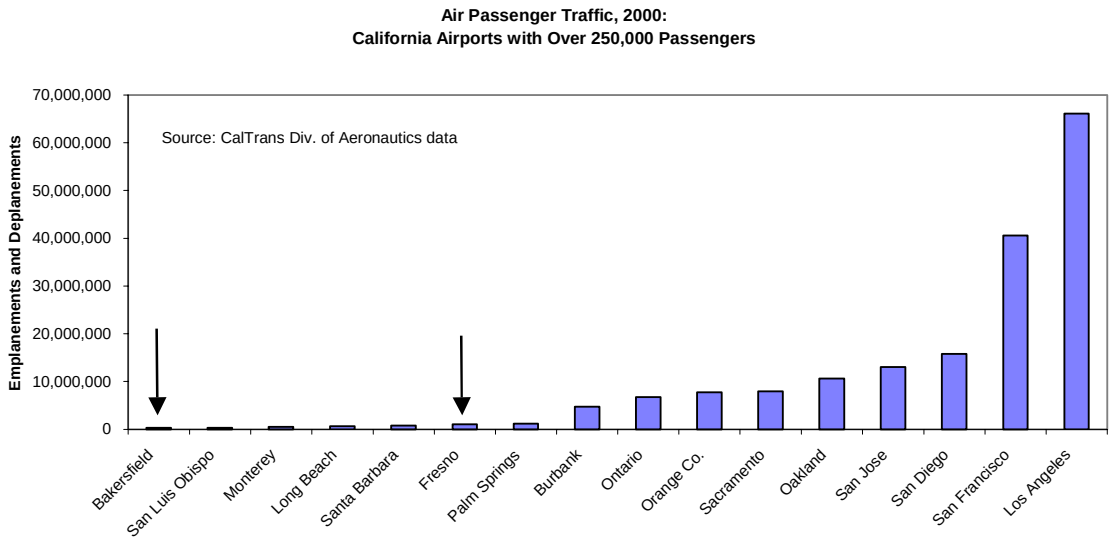
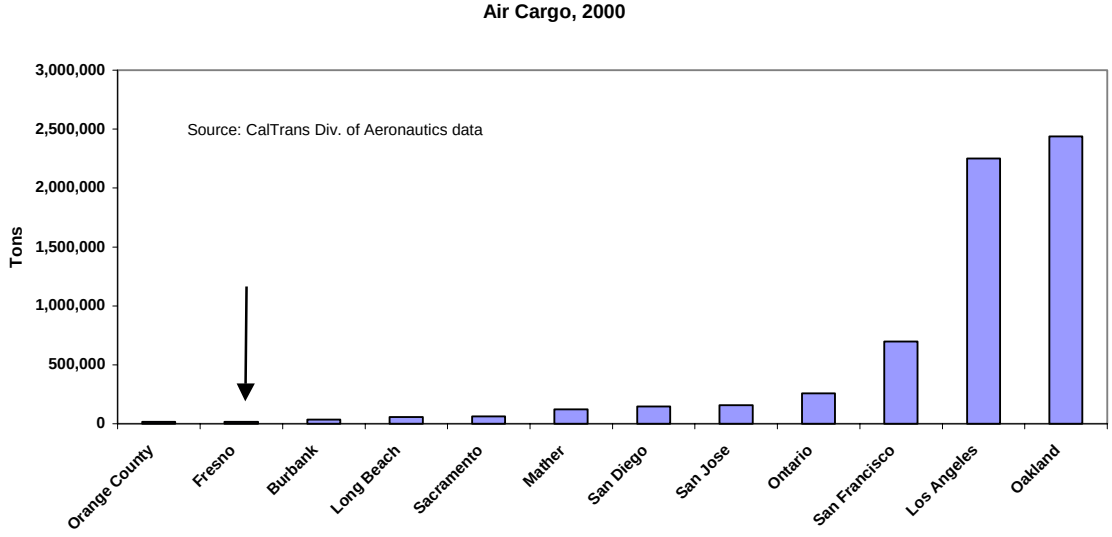


Chart 10-2 shows air cargo data, also for 2000, and shows a comparably modest role for San Joaquin Valley airports, specifically Fresno, marked by an arrow on the chart.

Chart 10-2



In addition to commercial airports, the San Joaquin Valley has many small private and general aviation airports.[14]

11. Environmental Issues and Characteristics

Most of the area encompassed by the San Joaquin Valley counties is in the San Joaquin Valley Bioregion, as shown in this CERES map of California bioregions.[15]

Map 11-1

BIOREGIONS AND LANDFORMS

The following is quoted from "The San Joaquin Valley Bioregion -- An Overview," provided by the California Resources Agency.[16]

> **Climate and Geography**
> Well-suited for farming, the bioregion is hot and dry in summer with long, sunny days. Winters are moist and often blanketed with heavy fog. The broad, flat valley is ringed by the Diablo and Coast Ranges on the west and the Sierra Nevada

foothills on the east. Habitat includes vernal pools, valley sink scrub and saltbush, freshwater marsh, grasslands, arid plains, orchards, and oak savannah. The growth of agriculture in the Central Valley has converted much of the historic native grassland, woodland, and wetland to farmland.

The major river is the San Joaquin, with tributaries of the lower Stanislaus, Tuolumne, Merced, and Fresno rivers. The California Aqueduct extends the entire length of the bioregion. The southern portion of the bioregion includes the Kings, Kaweah, and Kern rivers, which drain into closed interior basins. No significant rivers or creeks drain into the valley from the Coast Range.

Plants and Wildlife

Historically, millions of acres of wetlands flourished in the bioregion, but stream diversions for irrigation dried all but about 5 percent. Precious remnants of this vanishing habitat are protected in the San Joaquin Valley bioregion in publicly owned parks, reserves, and wildlife areas. Seasonal wetlands are found at the Kern National Wildlife Refuge west of Delano, owned by the U.S. Fish and Wildlife Service. It attracts a variety of ducks, shorebirds, and song birds, as well as peregrine falcons.

The Tule Elk State Reserve west of Bakersfield, owned by the state Department of Parks and Recreation, features the habitat of the tule elk -- natural grassland with ponds and marshes. The reserve sustains four endangered species -- the San Joaquin kit fox, blunt-nosed leopard lizard, San Joaquin antelope squirrel, and Tipton kangaroo rat -- the threatened plant Hoover's woolystar, and other rare species, such as western pond turtles, tricolored blackbird, and northern harrier. Endangered species of the bioregion also include the California tiger salamander, Swainson's hawk, and giant and Fresno kangaroo rat. Other rare species include the western yellow-billed cuckoo and valley elderberry longhorn beetle.

About one-fifth of the state's remaining cottonwood and willow riparian forests are found along the Kern River in the South Fork Wildlife Area. Great blue herons, beavers, coyotes, black bears, mountain lions, red-shouldered hawks, and mule deer can be seen in the wildlife area. Other wildlife viewing sites are Millerton Lake State Recreation Area west of Madera, Little Panoche Wildlife Area near Los Baños, and the Valley Grasslands of Merced County, which attract 500,000 to 1 million birds each winter to lands owned by the state Departments of Fish and Game and Parks and Recreation, Fish and Wildlife Service, and privately. The San Luis Dam and Reservoir area, jointly operated by the state Department of Water Resources and U.S. Bureau of Reclamation, draws wintering bald eagles, abundant ducks, gopher snakes, San Joaquin kit foxes, and black-tailed deer.

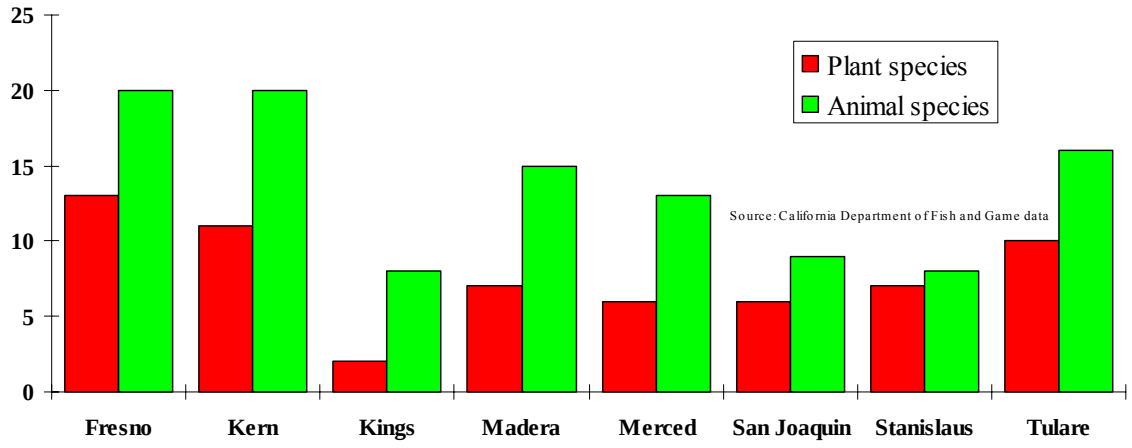
Rare plants in the bioregion include Mason's lilaeopsis, San Joaquin woollythreads, and California hibiscus.

ENDANGERED SPECIES

The counties of the San Joaquin Valley are home to a significant number of endangered plant and animal species. Chart 11-1 summarizes the numbers for each county as of a few years ago.[17]

Chart 11-1

Number of Listed Species in San Joaquin Valley Counties



WATER SUPPLY

California is divided into ten watershed regions. The counties of the San Joaquin Valley fall into two of them: San Joaquin River and Tulare Lake.[18]

Map 11-2

Table 11-1, below, is reproduced from Table 3-33 of the Department of Water Resource's Bulletin 160-98, *The California Water Plan*. It summarizes current and projected water supplies, by hydrologic region. Note that "taf" means "thousand acre feet."

Table 11-1

California Average Year Water Supplies by Hydrologic Region (with existing facilities and programs, in taf)

Region	1995				2020			
	Surface	Groundwater /a	Recycled & Desalted	Total (rounded)	Surface	Groundwatera	Recycled & Desalted	Total (rounded)
North Coast	20,331	263	13	20,610	20,371	288	13	20,670
San Francisco Bay	7,011	68	35	7,110	7,067	72	37	7,180
Central Coast	318	1,045	18	1,380	368	1,041	42	1,450
South Coast	3,839	1,177	207	5,220	3,625	1,243	273	5,140
Sacramento River	11,881	2,672	0	14,550	12,196	2,636	0	14,830
San Joaquin River	8,562	2,195	0	10,760	8,458	2,295	0	10,750
Tulare Lake	7,888	4,340	0	12,230	7,791	4,386	0	12,180
North Lahontan	777	157	8	940	759	183	8	950
South Lahontan	322	239	27	590	437	248	27	710
Colorado River	4,154	337	15	4,510	3,920	285	15	4,220
Total (rounded)	**65,090**	**12,490**	**320**	**77,900**	**64,990**	**12,680**	**410**	**78,080**

[a] Excludes groundwater overdraft.

Table 11-2, below, is reproduced from Table 3-34 of *The California Water Plan*. It summarizes current and projected water supplies, by hydrologic region, in a drought year.

Table 11-2

California Drought Year Water Supplies by Hydrologic Region (with existing facilities and programs, in taf)

Region	1995				2020			
	Surface	Groundwater /a	Recycled & Desalted	Total (rounded)	Surface	Groundwater /a	Recycled & Desalted	Total (rounded)
North Coast	10,183	294	14	10,490	10,212	321	14	10,550
San Francisco Bay	5,285	92	35	5,410	5,417	89	37	5,540
Central Coast	160	1,142	26	1,330	180	1,159	42	1,380
South Coast	3,196	1,371	207	4,770	3,130	1,462	273	4,870
Sacramento River	10,022	3,218	0	13,240	10,012	3,281	0	13,290
San Joaquin River	6,043	2,900	0	8,940	5,986	2,912	0	8,900
Tulare Lake	3,693	5,970	0	9,660	3,593	5,999	0	9,590
North Lahontan	557	187	8	750	557	208	8	770
South Lahontan	259	273	27	560	326	296	27	650
Colorado River	4,128	337	15	4,480	3,909	284	15	4,210
Total (rounded)	**43,530**	**15,780**	**330**	**59,640**	**43,320**	**16,010**	**420**	**59,750**

[a] Excludes groundwater overdraft.

For discussion and additional information, see *The California Water Plan*.[19]

WATER QUALITY

The United States Environmental Protection Administration (EPA) provides environmental information for watersheds in its "Surf Your Watershed" Web site.[20] Water quality is described by a series of categories:

1 Better Water Quality - Low Vulnerability
2 Better Water Quality - High Vulnerability
3 Less Serious Water Quality Problems - Low Vulnerability
4 Less Serious Water Quality Problems - High Vulnerability
5 More Serious Water Quality Problems - Low Vulnerability
6 More Serious Water Quality Problems - High Vulnerability
Data Sufficiency Threshold Not Met

Area maps below reflect this set of categories. **Note that watersheds and areas retrieved by county name inquiries do not necessarily conform to county boundaries, and some areas overlap.** County boundaries are indicated by outlines on the respective maps. To clarify the maps below, which do not reproduce well in black and white, annotations indicate the category, from "1" for "Better Water Quality – Low Vulnerability" to "6" for "More Serious Water Quality Problems – High Vulnerability."

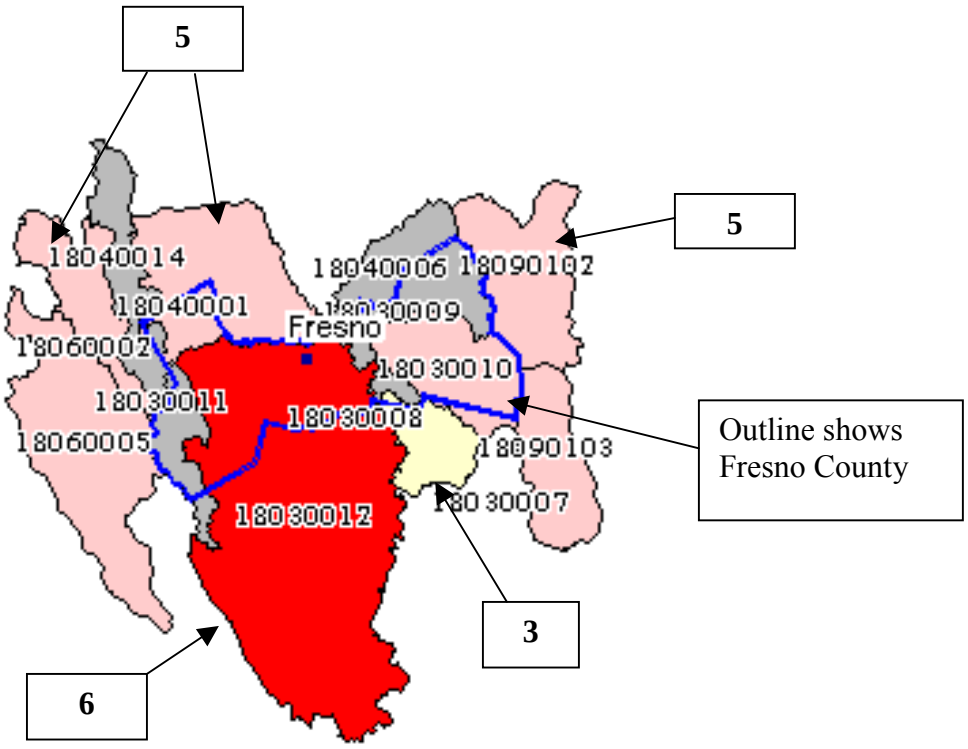
In short, the higher the number, the poorer the water quality and higher the risk. (Areas with insufficient data are not labeled.)

The eight-digit numbers on maps are hydrologic unit codes (HUC codes).[21]

It is apparent that water quality problems are common in the watersheds of the San Joaquin Valley, including many areas in the "More Serious Water Quality Problems" categories, numbered 5 and 6 below.

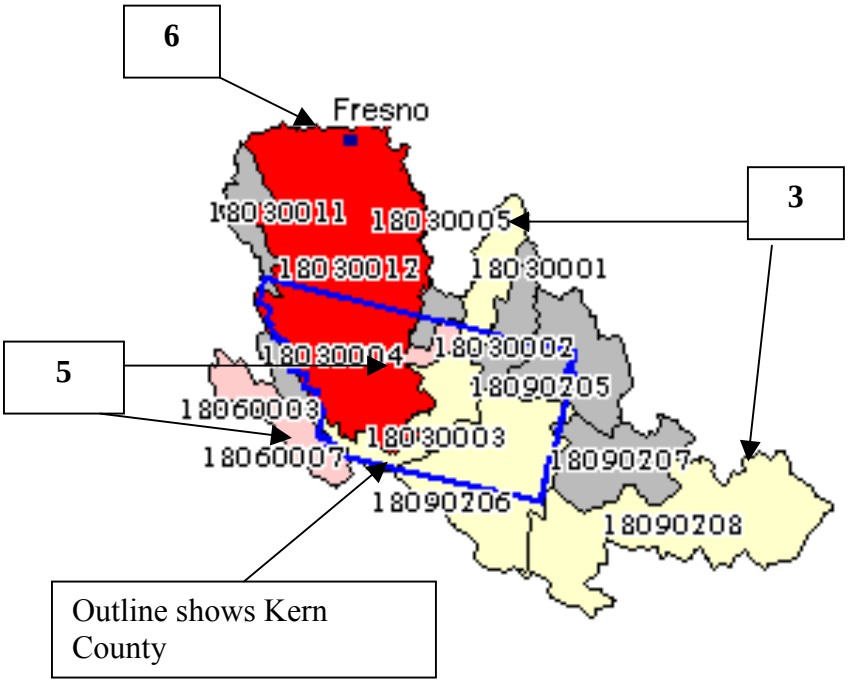
Fresno

Fresno's watersheds are predominantly in the problem categories, according to EPA data.



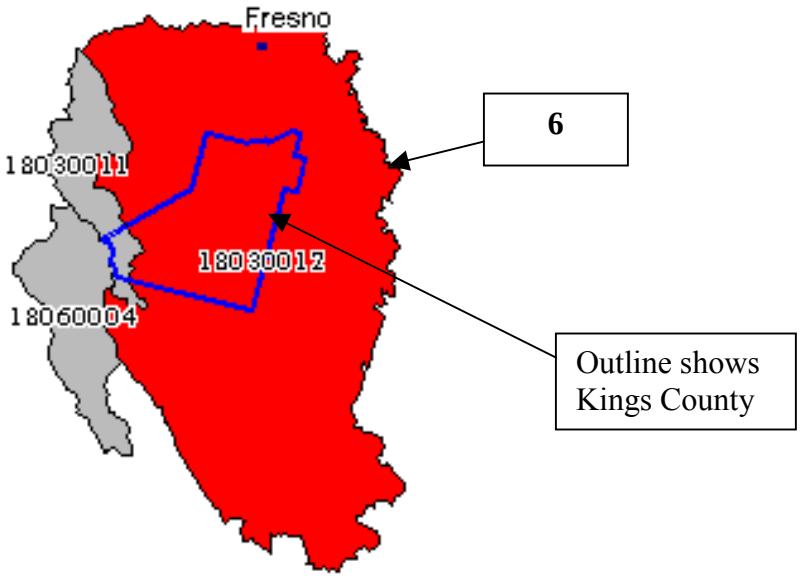
Kern

Kern's watersheds include a seriously impaired area, but also some with better ratings.



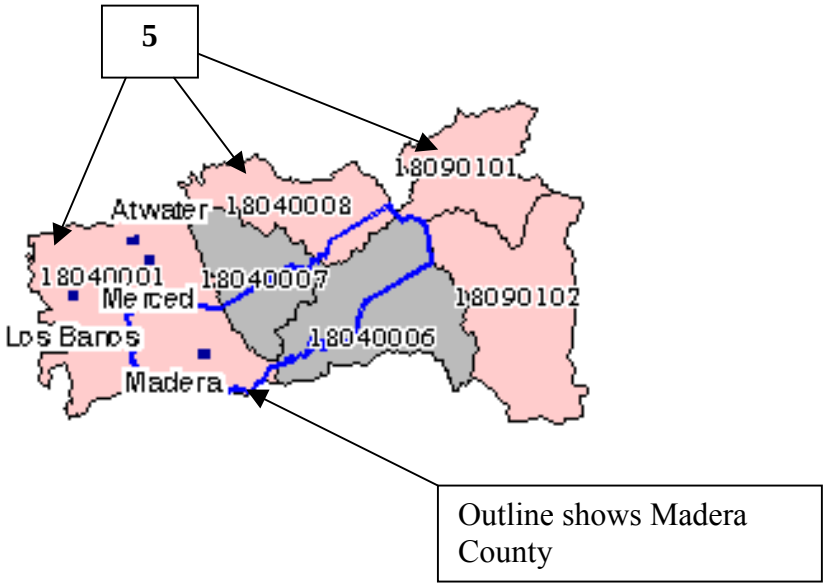
Kings

Kings County's watersheds are predominantly in the most seriously impaired category.



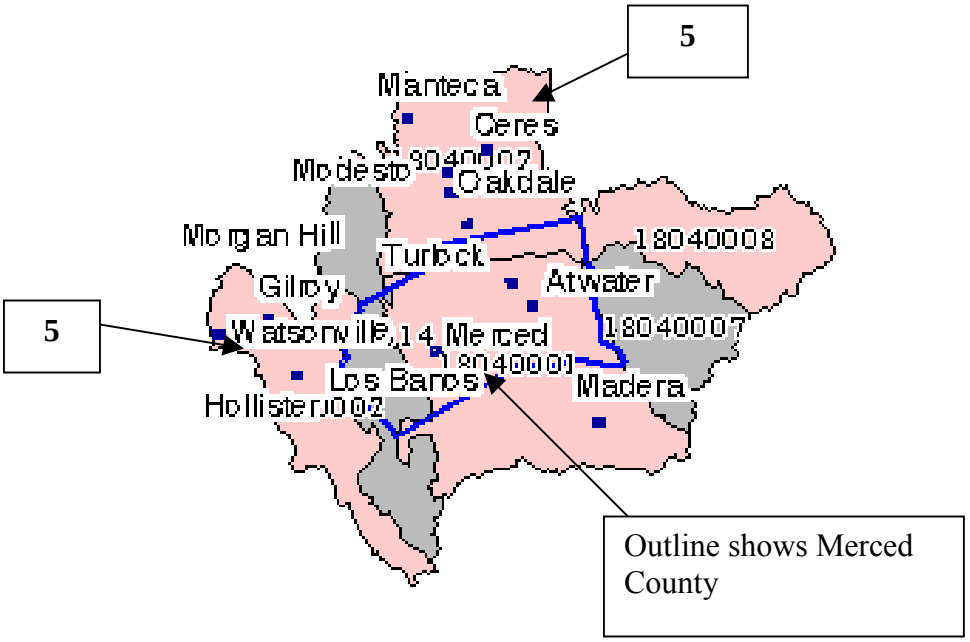
Madera

Madera's watersheds are generally seriously impaired.



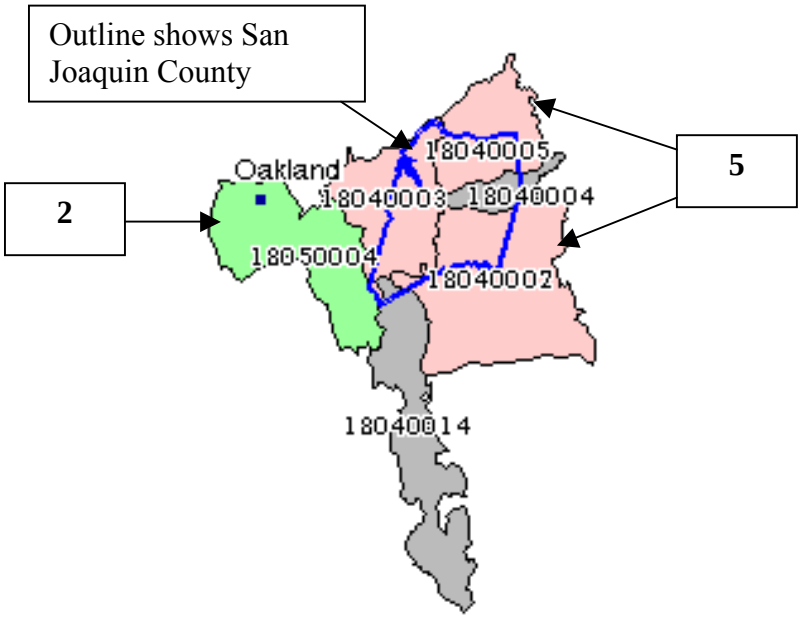
Merced

Merced's watersheds are seriously impaired.



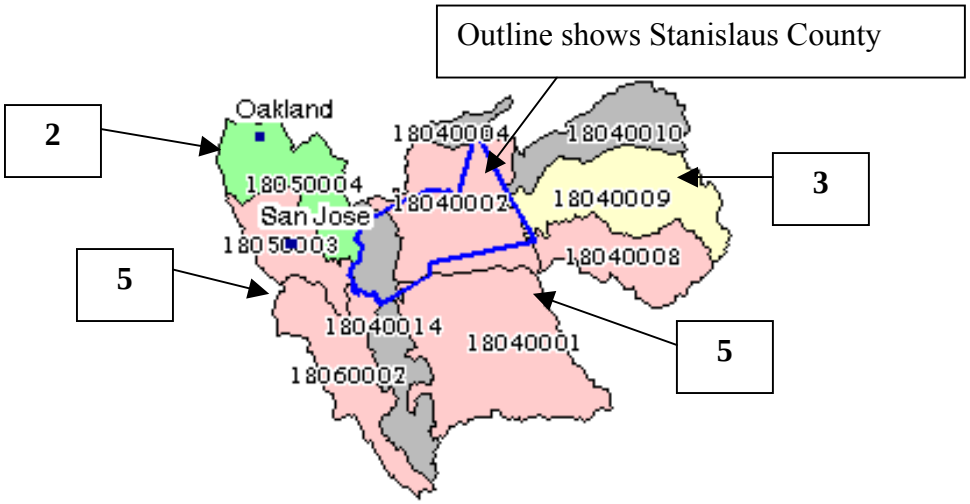
San Joaquin

The San Joaquin watersheds (which extend to the West outside San Joaquin County) are generally in a seriously impaired category. The exception is the western portion near Oakland.



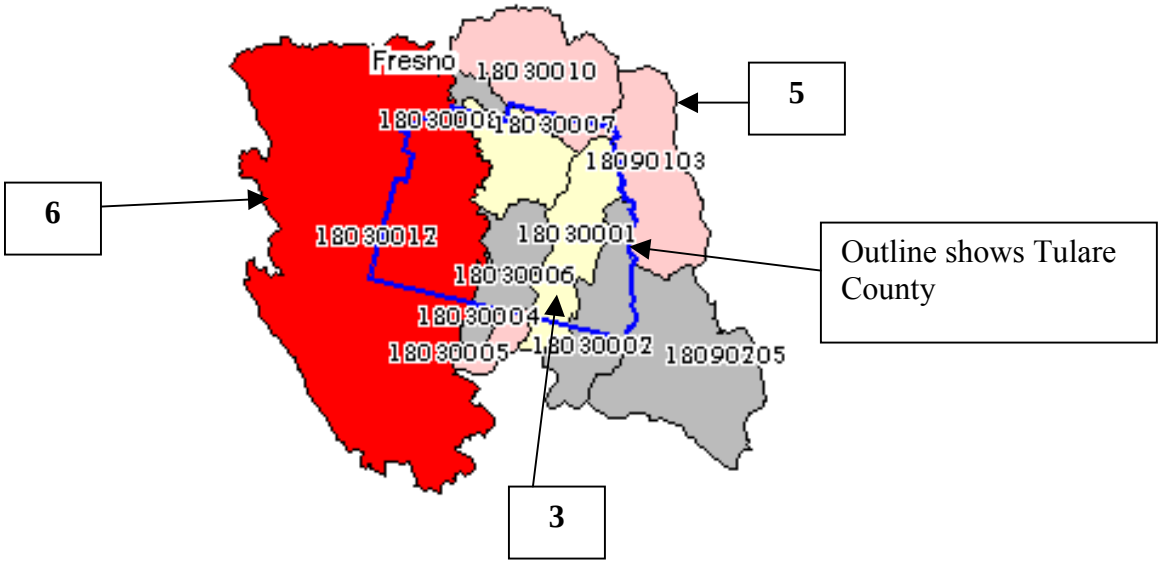
Stanislaus

Stanislaus shows a mixed picture, but like San Joaquin's watershed, this one also extends to the west. The Valley areas are impaired, for the most part seriously.



Tulare

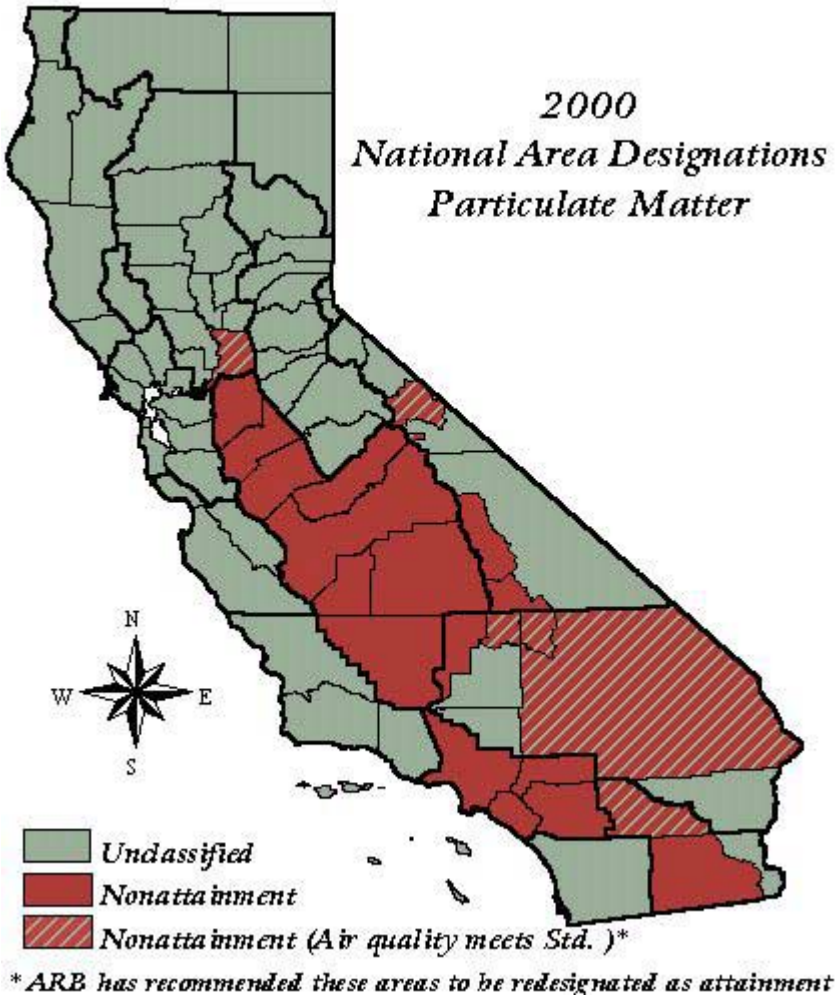
The Tulare watershed areas are mostly in the seriously impaired categories.



AIR QUALITY

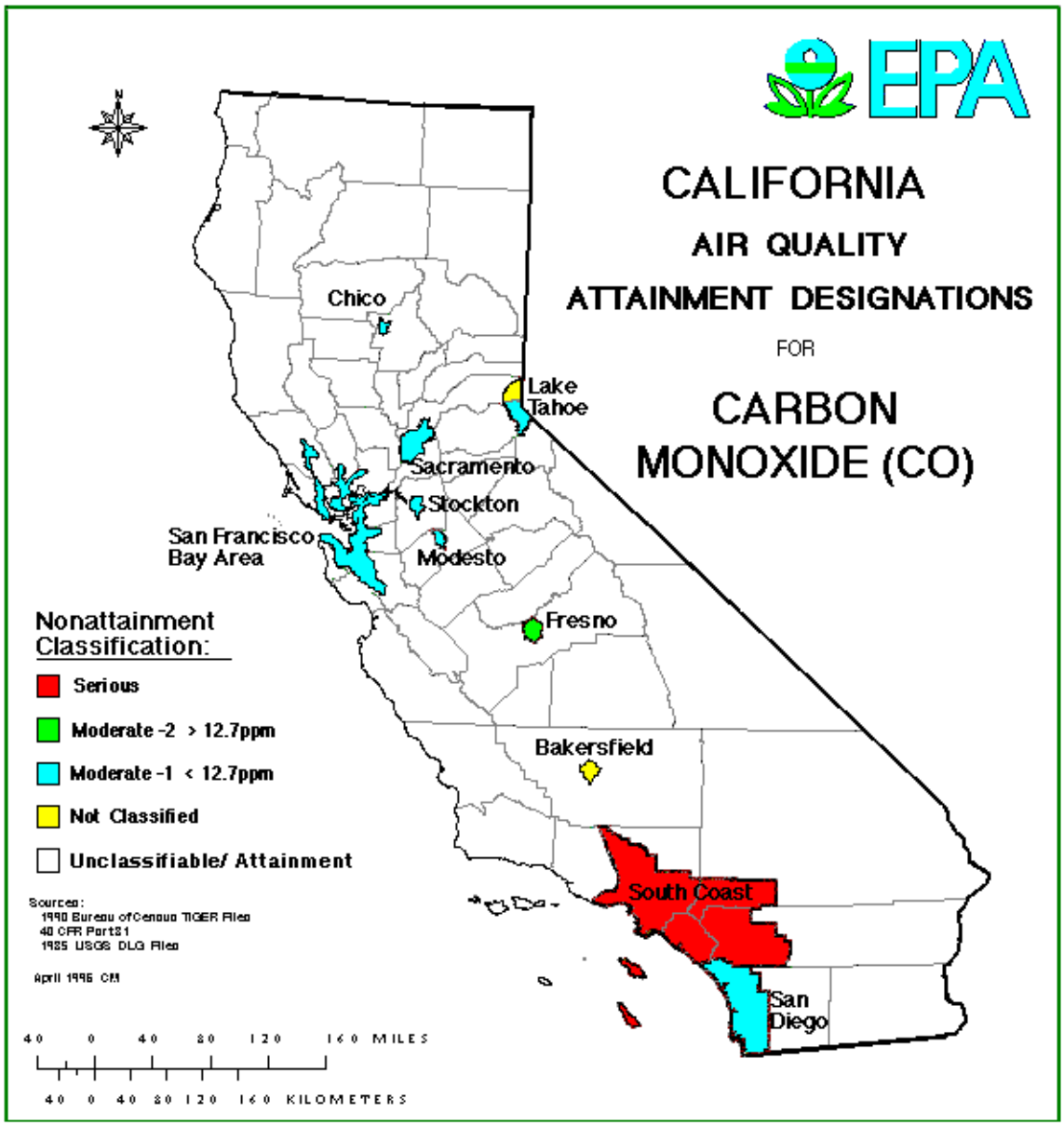
The entire San Joaquin Valley is a nonattainment area (below standards) for particulate matter, according to federal standards, as shown in Map 11-3, below, reproduced from the Air Resources Board Web site. Particulate matter is only one measure of air quality, but it is an important one.

Map 11-3



The counties of the San Joaquin Valley are generally in compliance with regard to carbon monoxide (CO), with the important exception of urbanized areas (see Map 11-4), and are in compliance with respect to nitrogen dioxide (NO_2), for which all areas in California have attained desirable levels.[22]

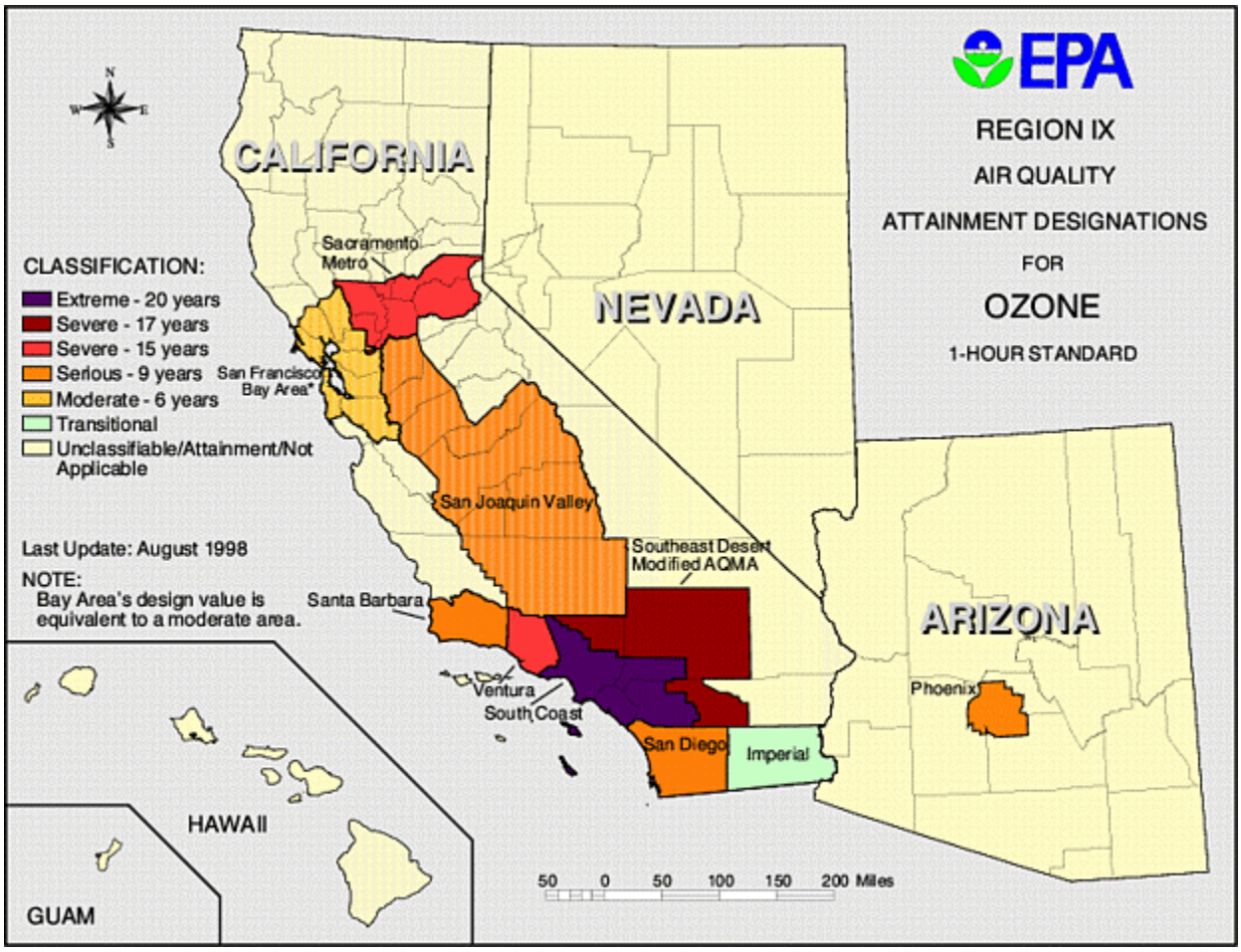
Map 11-4



Ozone remains a problem:

> On October 23, 2001, EPA reclassified ("bumped up") the San Joaquin Valley ozone nonattainment area from serious to severe because the area failed to attain the health-based, 1-hour National Ambient Air Quality Standard for ozone by its Clean Air Act deadline of November 15, 1999. [23]

Map 11-5


EPA
REGION IX
AIR QUALITY
ATTAINMENT DESIGNATIONS
FOR
OZONE
1-HOUR STANDARD
CALIFORNIA
NEVADA
ARIZONA
HAWAII
GUAM
CLASSIFICATION:
Extreme - 20 years
Severe - 17 years
Severe - 15 years
Serious - 9 years
Moderate - 6 years
Transitional
Unclassifiable/Attainment/Not Applicable
Last Update: August 1998
NOTE:
Bay Area's design value is equivalent to a moderate area.
Sacramento Metro
San Francisco Bay Area*
San Joaquin Valley
Southeast Desert Modified AQMA
Santa Barbara
Ventura
South Coast
San Diego
Imperial
Phoenix
50 0 50 100 150 200 Miles

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Appendix: Major Employers, by County

The following lists are adapted from information posted by the California Employment Development Department at ***http://www.calmis.cahwnet.gov/htmlfile/subject/MajorER.htm***.

These lists of major employers were developed using the 2000 America's Labor Market Information System (ALMIS) Employer Database from **infoUSA** and are sorted in alphabetical order by company name. The industry shown is based upon the **Standard Industrial Classification**.

Fresno

Employer Name	Location	Industry
California State University	Fresno	Colleges & Universities
Del Monte Corp	Kingsburg	Preserved Fruits & Vegetables
Fresno Ag Labor Services	Fresno	Farm Labor and Management Services
Fresno City College	Fresno	Colleges & Universities
Fresno Community Medical Center	Fresno	Hospitals
Gerawan Farming	Fresno	Fruits and Tree Nuts
Glacier Foods	Sanger	Preserved Fruits & Vegetables
Gottschalks Inc	Fresno	Department Stores
Ito Packing Co	Reedley	Preserved Fruits & Vegetables
J & J Agri Services	Raisin	Farm Labor and Management Services
Kreger Inc	Five Points	Vegetables and Melons
University Medical Center	Fresno	Hospitals
US Veterans Medical Center	Fresno	Hospitals

Wawona Frozen Foods	Clovis	Preserved Fruits & Vegetables

Kern

Employer Name	Location	Industry
Aera Energy LLC	Bakersfield	Crude Petroleum & Natural Gas
Bakersfield College	Bakersfield	Colleges & Universities
Bakersfield Memorial Hospital	Bakersfield	Hospitals
Bear Creek Production Co	Wasco	Misc. Nondurable Goods
Benjamin Picar Farm Labor	Delano	Personnel Supply Services
Edwards AFB	Edwards	Public Administration (Government)
Giumarra Vineyards Corp	Edison	Beverages
Kern County	Bakersfield	Public Administration (Government)
Kern Medical Center	Bakersfield	Hospitals
Mercy Healthcare-Bakersfield	Bakersfield	Hospitals
Nalbandian Sales Inc	Lamont	Groceries & Related Products
Naval Air Warfare Center	Ridgecrest	Public Administration (Government)
San Joaquin Community Hospital	Bakersfield	Hospitals
State Farm Insurance	Bakersfield	Insurance Agents, Brokers, & Service
William Bolthouse Farms Inc	Bakersfield	General Farms, Primarily Crop

Kings

Employer Name	Location	Industry
California State Prison	Corcoran	Public Administration (Government)
Central Valley General Hosp	Hanford	Hospitals
Del Monte Corp	Hanford	Preserved Fruits & Vegetables
Hanford Community Medical Center	Hanford	Hospitals
Hanford Joint High School Dist	Hanford	Elementary & Secondary Schools
Kings County	Hanford	Public Administration (Government)
Leprino Foods Co	Lemoore	Dairy Products
Palace Bingo	Lemoore	Misc. Amusement, Recreation Services
Pirelli Armstrong Tire Corp	Hanford	Tires & Inner Tubes
S K Foods	Lemoore	Misc. Food & Kindred Products
US Naval Air Station	Lemoore NAS	Public Administration (Government)
Wal-Mart	Hanford	Department Stores
Warmerdam Packing	Hanford	Fresh Fruits and Vegetables - Wholesale

Madera

Employer Name	Location	Industry
Almaden	Madera	Beverages
Canandaigua Wineries	Madera	Beverages
D Papagni Fruit Co	Madera	Fruits and Tree Nuts
Madera Community Hospital	Madera	Hospitals
Mission Bell Winery	Madera	Beverages
Valley Children's Hospital	Madera	Hospitals
Valley State Prison For Women	Chowchilla	Public Administration (Government)

Merced

Employer Name	Location	Industry
Atwater Canning Co	Atwater	Preserved Fruits & Vegetables
Foster Farms	Livingston	Meat Products
Joseph Gallo Farms	Atwater	General Farms, Primarily Animal
Lipton	Merced	Preserved Fruits & Vegetables
Merced College	Merced	Colleges & Universities
Mercy Hospital	Merced	Hospitals
Quebecor World	Merced	Misc. Publishing
Sutter Merced Medical Center	Merced	Hospitals

San Joaquin

Employer Name	Location	Industry
California Dept. of Corrections	Tracy	Public Administration (Government)
California Youth Authority	Stockton	Public Administration (Government)
City of Stockton	Stockton	Public Administration (Government)
County of San Joaquin	Stockton	Public Administration (Government)
Dameron Hospital	Stockton	Hospitals
Del Monte Corp	Stockton	Preserved Fruits & Vegetables
Deuel Vocational Institution	Tracy	Public Administration (Government)
Lodi Memorial Hospital	Lodi	Hospitals
O-G Packing Co	Stockton	Public Warehousing & Storage
Pacific Coast Producers	Lodi	Preserved Fruits & Vegetables
Pacific Gas & Electricity	Stockton	Electric Services
Physician Referral Services	Lodi	Health & Allied Services, All Other
San Joaquin Delta College	Stockton	Colleges & Universities
St Joseph's Medical Center	Stockton	Hospitals
Stockton Unified School District	Stockton	Elementary & Secondary Schools
Summit Logistics	Tracy	Grocery Stores
Tracy Joint Union High School Dist	Tracy	Elementary & Secondary Schools
US Defense Department	Stockton	Public Administration (Government)

Stanislaus

Employer Name	Location	Industry
Del Monte Corp	Modesto	Preserved Fruits & Vegetables
Doctor's Medical Center	Modesto	Hospitals
E & J Gallo Winery	Modesto	Beverages
Emanuel Medical Center	Turlock	Hospitals
Foster Farms	Turlock	Poultry Processing - Manufacturing
E & J Gallo Winery	Modesto	Wineries
Hunt Wesson	Oakdale	Preserved Fruits & Vegetables
Memorial Hospital	Modesto	Hospitals
Modesto Bee	Modesto	Newspapers
Modesto Junior College	Modesto	Colleges & Universities
Patterson Frozen Foods	Patterson	Preserved Fruits & Vegetables
Prompt Care-Memorial Hospital	Modesto	Hospitals
Save Mart Supermarkets Inc	Modesto	Grocery Stores
Spring Anesthesia Group	Modesto	Hospitals
Stanislaus Food Products	Modesto	Preserved Fruits & Vegetables
Tri Valley Growers	Modesto	Preserved Fruits & Vegetables

Tulare

Employer Name	Location	Industry
Cigna Co	Visalia	Insurance Agents, Brokers, & Service
College of the Sequoias	Visalia	Colleges & Universities
Dairyman's Co-Op Creamery Assn	Tulare	Dairy Products
Haagen-Dazs Ice Cream	Tulare	Dairy Products
Jostens Printing & Publishing	Visalia	Commercial Printing
Kaweah Delta District Hospital	Visalia	Hospitals
Latino Farm Labor Svc	Visalia	Misc. Special Trade Contractors
Porterville Developmental Center	Porterville	Hospitals
Porterville Sheltered Workshop	Porterville	Job Training & Related Services
Ruiz Food Products Inc	Dinuba	Misc. Food & Kindred Products
Sadoian Brothers	Dinuba	Groceries & Related Products
Sanchez & Diaz	Woodlake	Personnel Supply Services
Sierra View District Hospital	Porterville	Hospitals
Steven Pavich & Son Inc	Porterville	General Farms, Primarily Crop
Tulare County	Visalia	Public Administration (Government)
Tulare District Hospital	Tulare	Hospitals
Valley Labor Services	Dinuba	Personnel Supply Services

This list was developed using the America's Labor Market Information System (ALMIS) Employer Database from infoUSA. This database of 10 million U.S. businesses is provided in conjunction with the Department of Labor and infoUSA, Omaha, Nebraska, 68127. Resale of this data is prohibited. Copyright 2000 infoUSA, All rights reserved. The Employer Database list is developed by infoUSA using the local phone books and calling the employer directly to obtain the information.

USER NOTE: *Users should be aware that in some instances, the company shown may have its headquarters in the county, but the employees are actually located throughout the state. In many areas, government agencies are major employers but may not be shown here.* ***Information provided through this database is not a product of the Covered Employment and Wages Report (ES-202) Program.***

See http://www.calmis.cahwnet.gov/htmlfile/subject/MajorER.htm for source and for additional data by county.

Notes

[1] "UC Merced Prepares to Hire First Faculty Members," press release, http://www.ucmerced.edu/pressreleases/foundingfac.htm.

[2] Data from the 1997 Census of Agriculture *Ranking of States and Counties*, May 1999. For those who wonder, Weld County, Colorado, was fifth nationally in both 1997 and 1992, and Yakima County, Washington, tenth in 1997, twelfth in 1992. Several other California counties make the top 100 nationally, including Kings and Madera (eighteenth and twenty-fifth respectively, for 1997).

[3] See http://www.census.gov/Press-Release/www/2001/tables/dp_ca_2000.xls.

[4] Source for Table 3-1 is *California Statistical Abstract 2001*, Table G-14.

[5] Source for Table 3-2 is *California Statistical Abstract 2001*, Table G-15.

[6] "Indiana Farmers Finding Specialty Crops Popular," August 8, 1998, Knight-Ridder Tribune, Jo Ellen Myers Sharp, *The Indianapolis Star and News*, posted as part of a series of short articles at http://www.plant.uoguelph.ca/riskcomm/archives/agnet/1998/8-1998/ag-8-10-98-1.txt.

[7] As of June 30, 2001, Washington Mutual had nearly $60 billion in deposits in California offices, including over $5.1 billion in San Joaquin County, with over $4.9 billion of that at the main office, in Stockton. In terms of assets and deposits, Washington Mutual is the largest California-based financial institution.

[8] Data are from Department of Employment Development.

[9] Specifically, according to the Introduction to *County Health Status Profiles 2001*, "Age-adjusted rates use the 2000 Standard Population (prior reports used the 1940 Standard Population." See Appendix A of the *Profiles* document for a comparison of the two sets of figures.

[10] See page 3 of *County Health Status Profiles 2001*. Figures in the chart are from Table 1 of that publication.

[11] *County Health Status Profiles 2001*, p. 55.

[12] DHS, *Health Data Summaries for California Counties, 2000*, definitions, p. 262.

[13] Data for charts 10-1 and 10-2 were provided by staff of the Division of Aeronautics, California Department of Transportation, and reflect information provided by airports.

[14] A list is available at the CalTrans Division of Aeronautics site, http://www.dot.ca.gov/hq/planning/aeronaut/htmlfile/airports.html.

[15] See http://www.ceres.ca.gov/geo_area/bioregion_index.html.

[16] See http://ceres.ca.gov/geo_area/bioregions/San_Joaquin_Valley/about.html. The bioregion is described in this way: "Eight counties comprise the San Joaquin Valley bioregion, including all of Kings County, most of Fresno, Kern, Merced, and Stanislaus

counties, and portions of Madera, San Luis Obispo, Tulare counties." The list omits San Joaquin County, which is part of the Bay-Delta bioregion for environmental purposes, and includes part of San Luis Obispo County. Parts of the San Joaquin Valley counties fall into the Sierra, Mojave, and Central Coast bioregions.

[17] Chart 11-1 reflects a summary compiled by CRB staff in 1997 and may be approximate. Detailed information on listed species in California is available at the U.S. Fish and Wildlife Service Threatened and Endangered Species System (TESS) site, http://ecos.fws.gov/webpage/webpage_usa_lists.html?state=CA. Additional information is available from the California Department of Fish and Game Habitat Conservation Planning Branch, *Annual Report on the Status of Endangered, Threatened, and Candidate Species*, http://www.dfg.ca.gov/hcpb/species/t_e_spp/ann_te_rpt.shtml.

[18] See http://ceres.ca.gov/watershed/geographic.html.

[19] Available in text and Adobe Portable Document Format via http://rubicon.water.ca.gov/b160index.html.

[20] See http://cfpub.epa.gov/surf/locate/index.cfm for access to this information.

[21] See http://www.geocities.com/tccdpa/waters/hucs.html for discussion of HUCs.

[22] See http://www.epa.gov/region09/air/maps/r9_no2.html.

[23] See http://www.epa.gov/region09/air/sjvalley/#1001; also see related press release at http://yosemite.epa.gov/r9/r9press.nsf/7f3f954af9cce39b882563fd0063a09c/e3b9b3913128c71b88256aee007f26ba?OpenDocument; map is from http://www.epa.gov/region09/air/maps/r9_o3.html.